

FIG. 1A

00000000000000000000000000000000

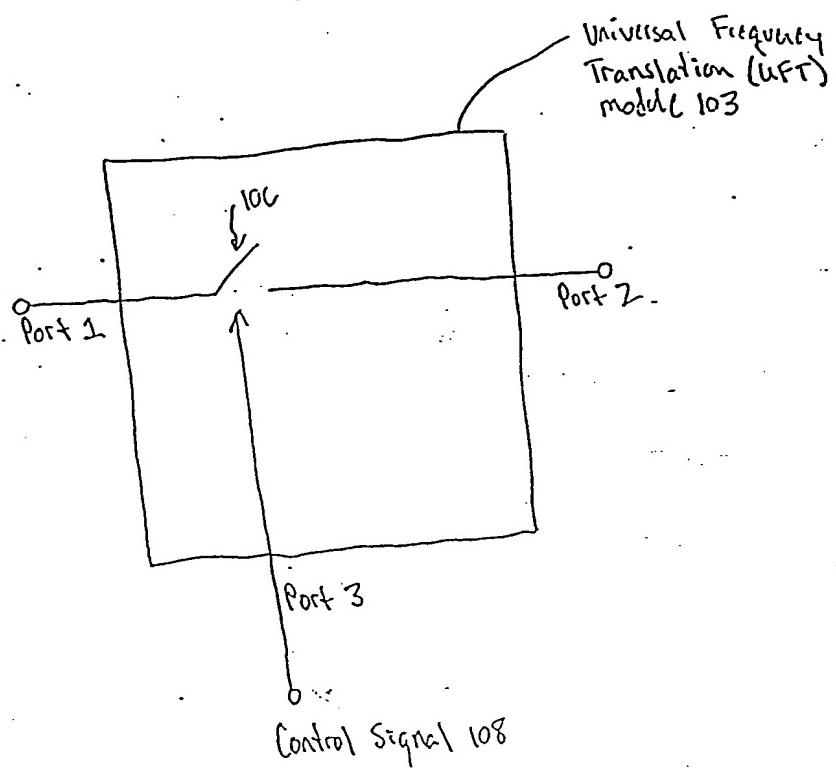


FIG. 1B

09355654 054604

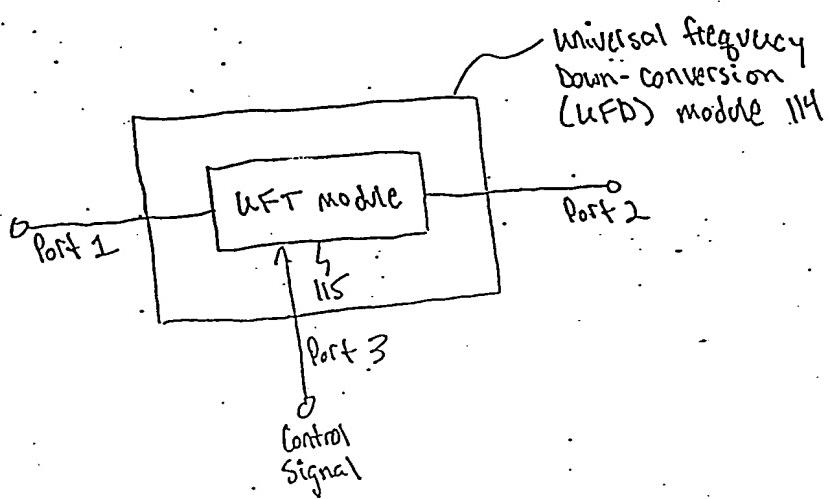


FIG. 1C

09355654 054604

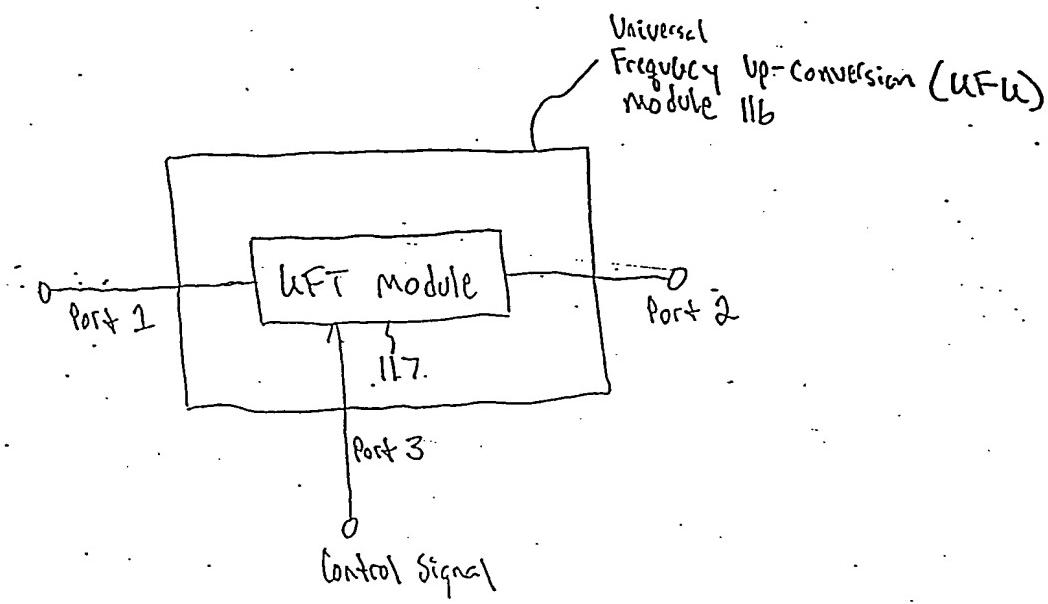


FIG. 1D

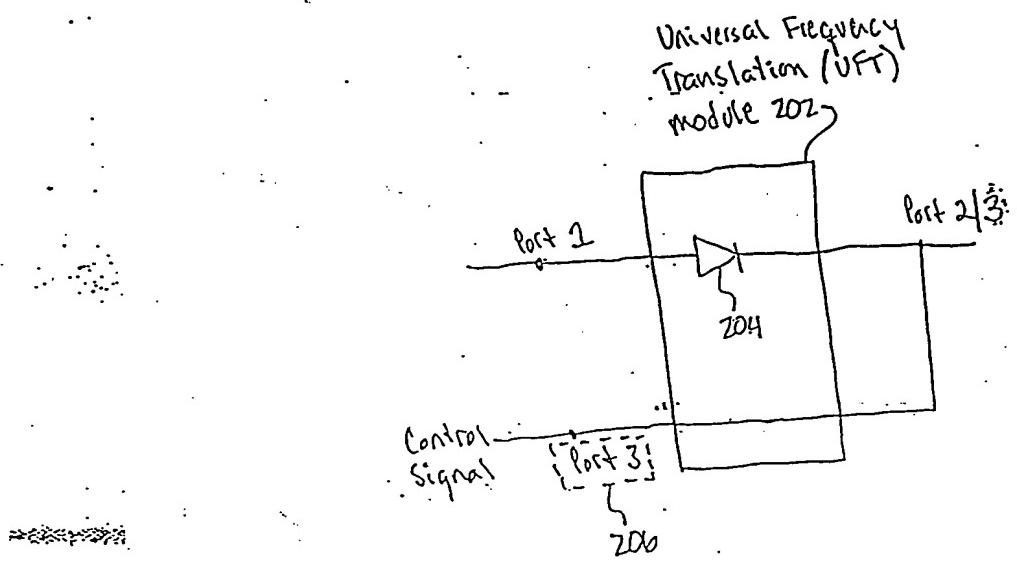


FIG. 2

PROT 5555555555555555

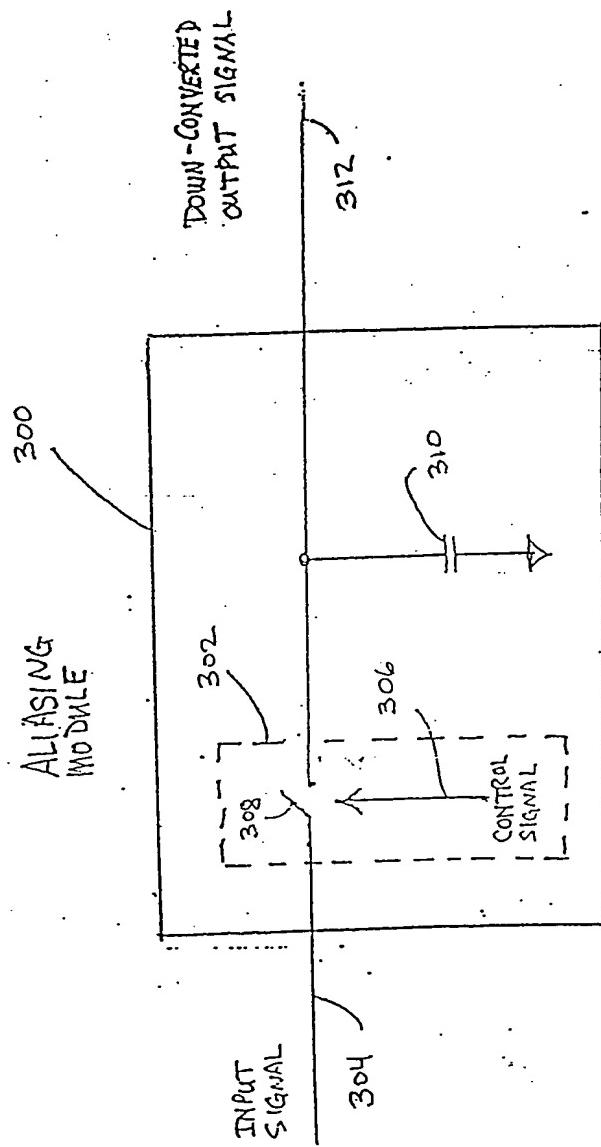


FIG. 3A

FIG. 3B

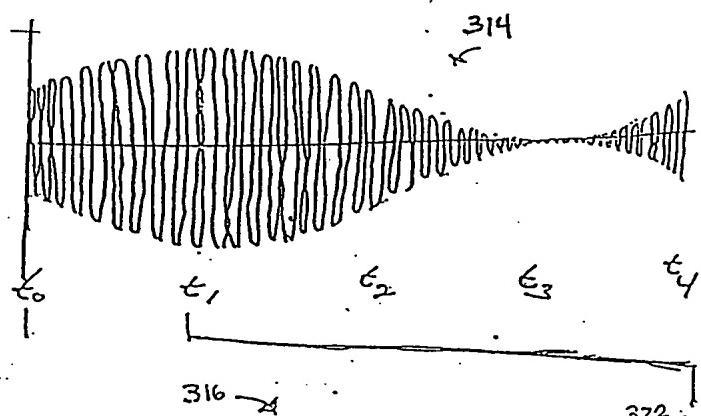


FIG. 3C

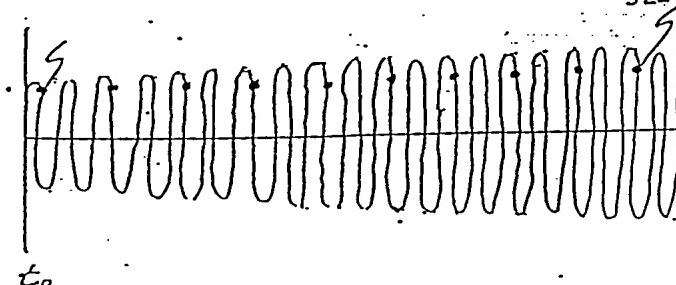


FIG. 3D

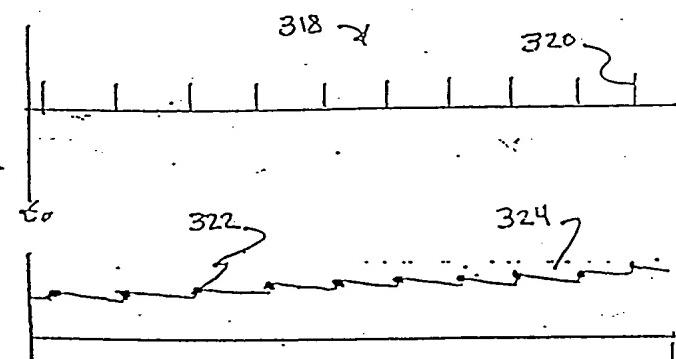


FIG. 3E

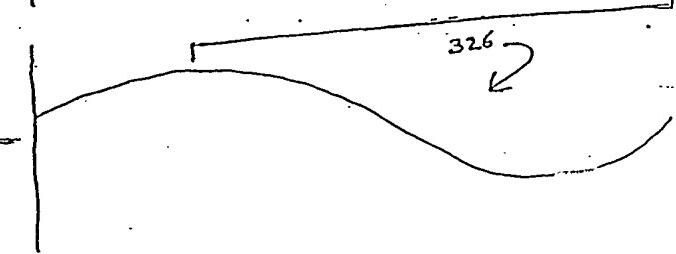


FIG. 3F



M

PROGRESS REPORTS

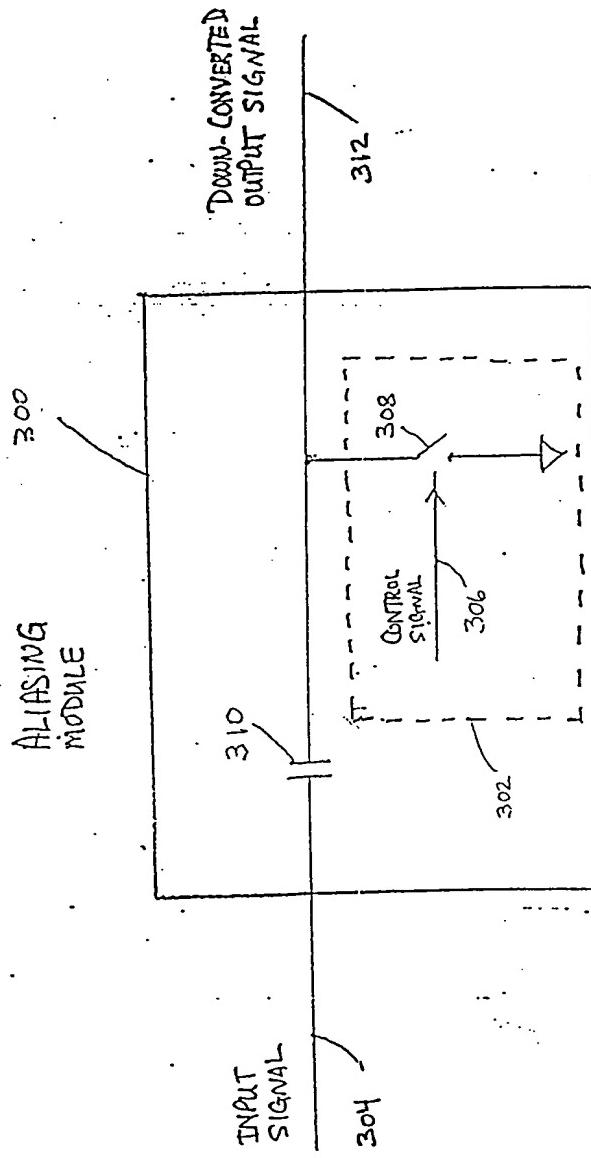


FIG. 3G

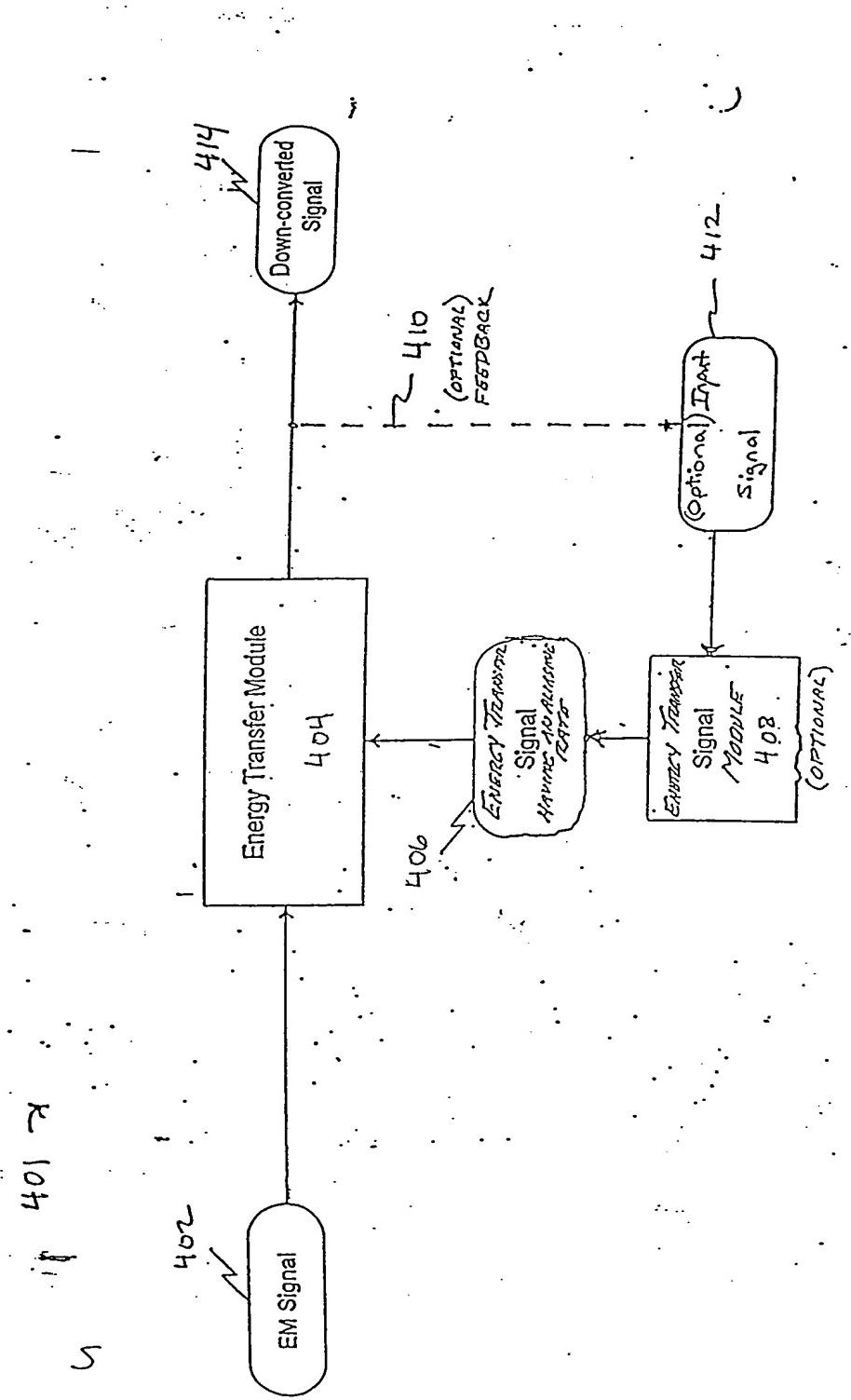


FIG. 4

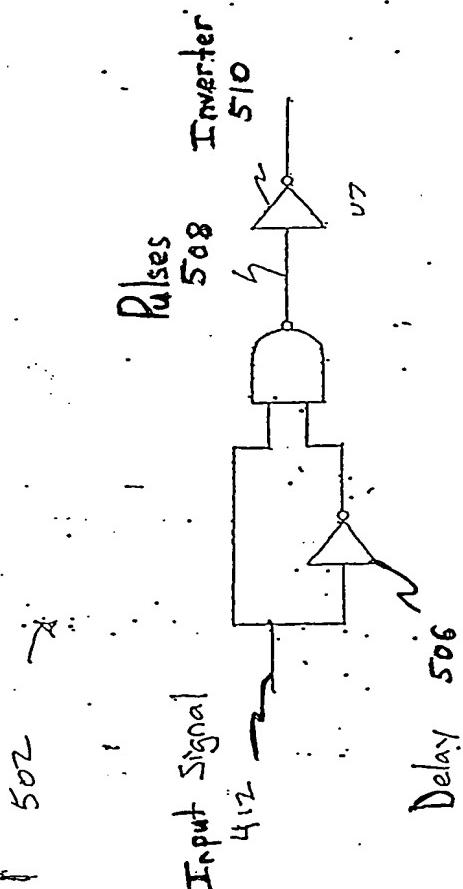


FIG. 5

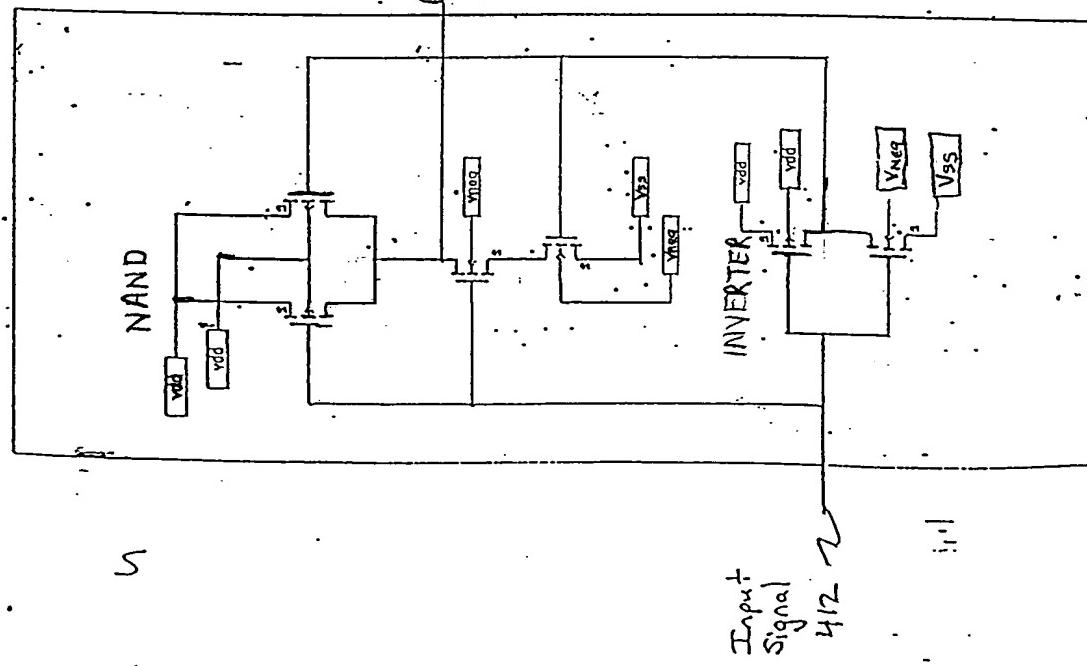


FIG. 6B

FIG. 6A

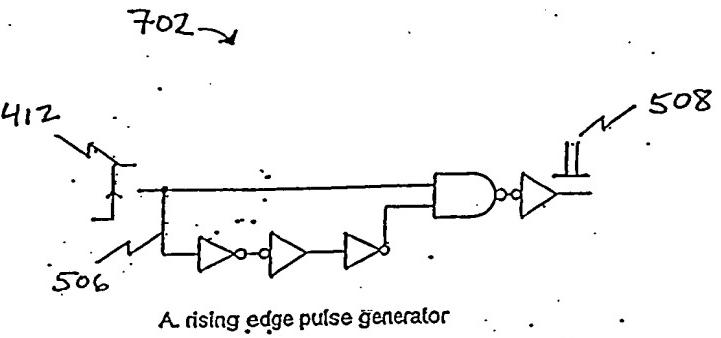


FIG. 7A

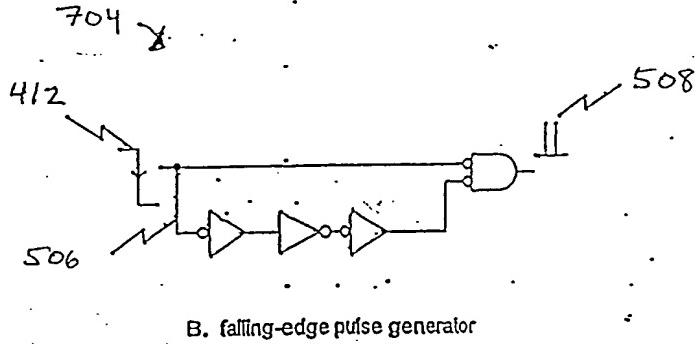


FIG. 7B

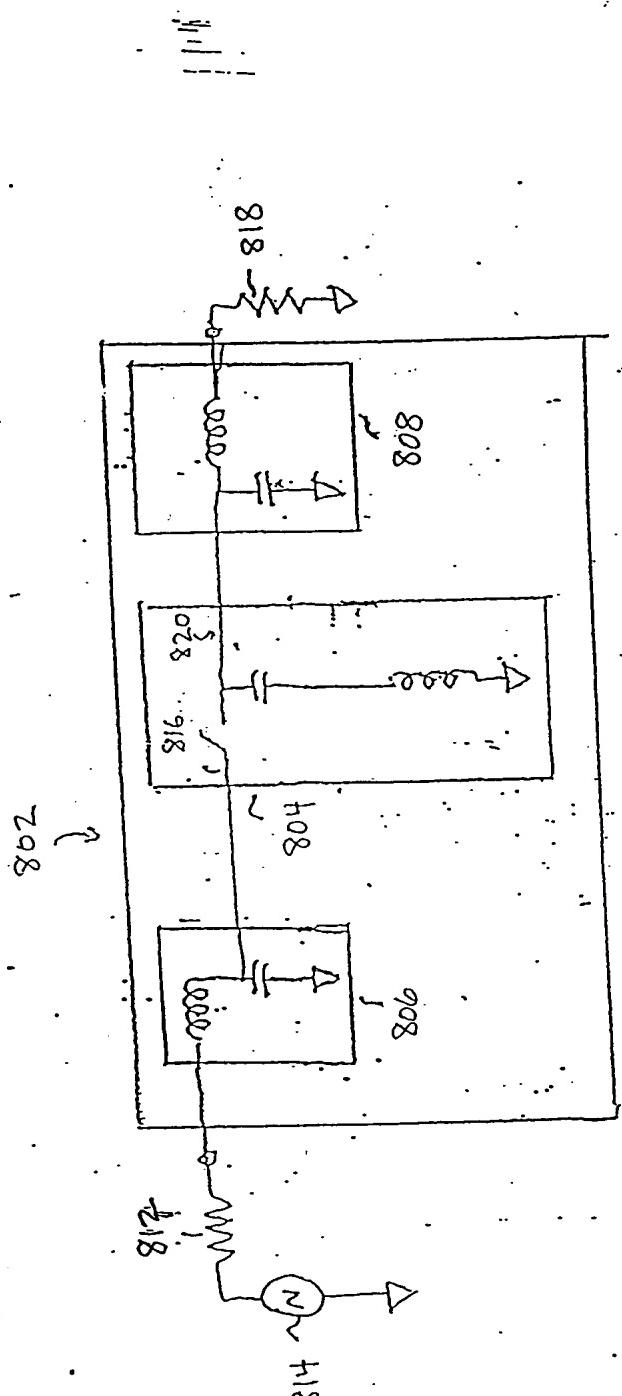


Fig. 8 : Impedance Matched Absorbing Module

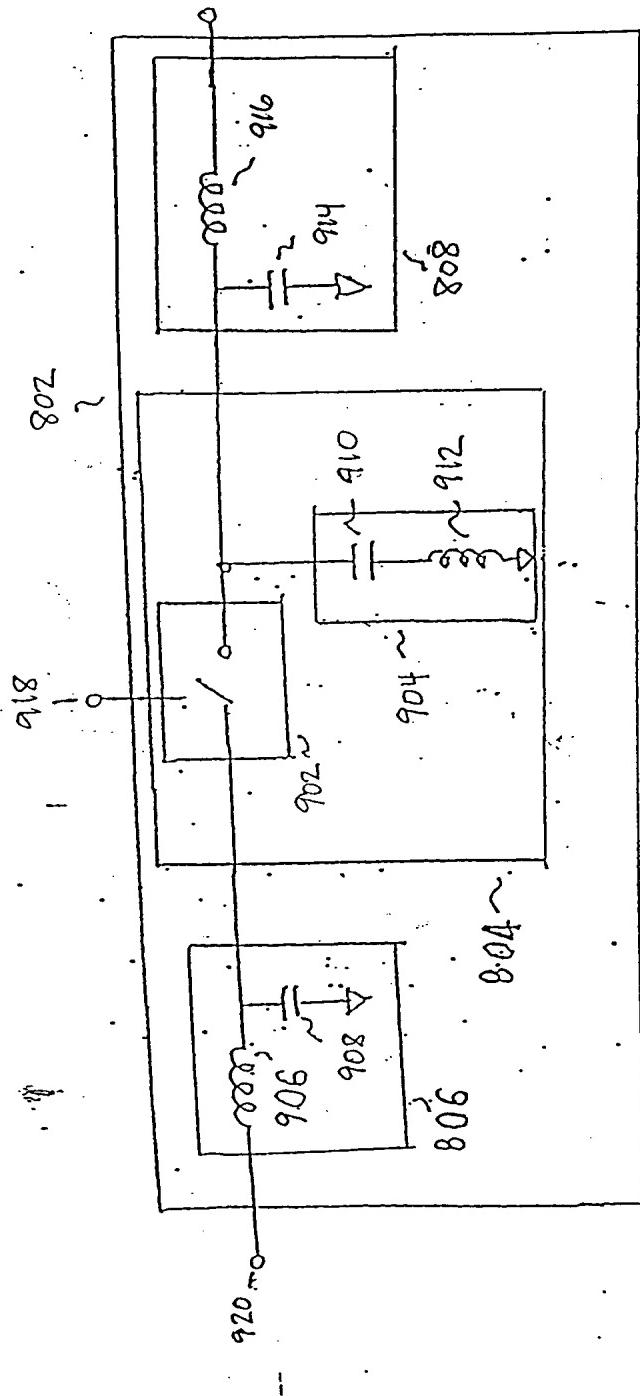


Fig 9 - Aliasing Module

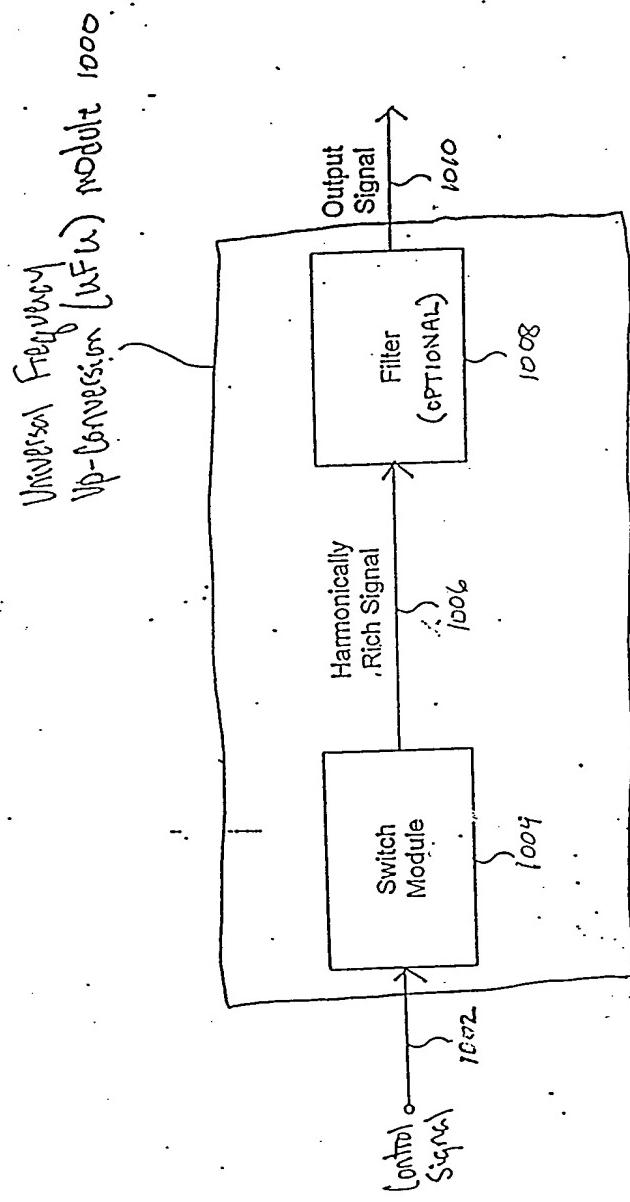


FIG. 10

0623344544444444

Universal Frequency
Up-conversion (UFC) module 1010
→

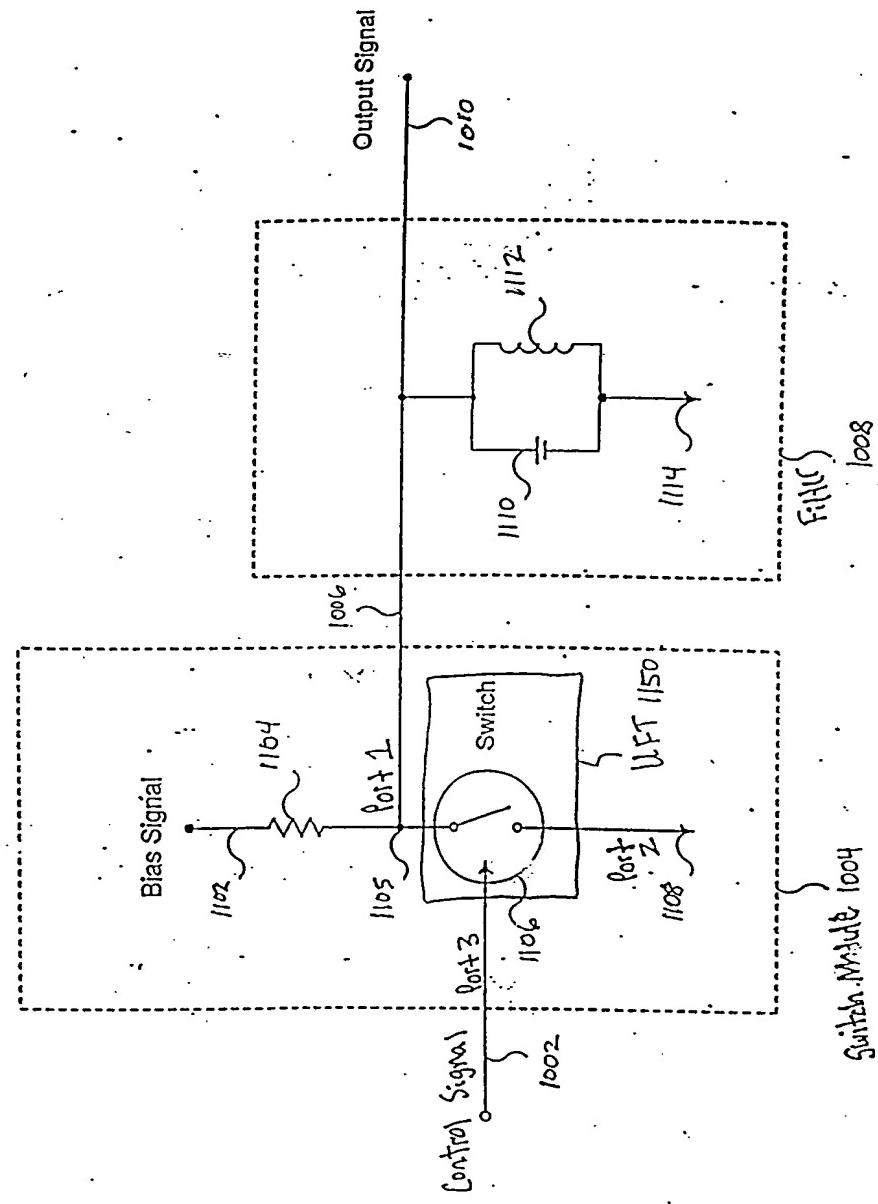


FIG. II

Universal Frequency
Up-Conversion
(UFW) Module 1290

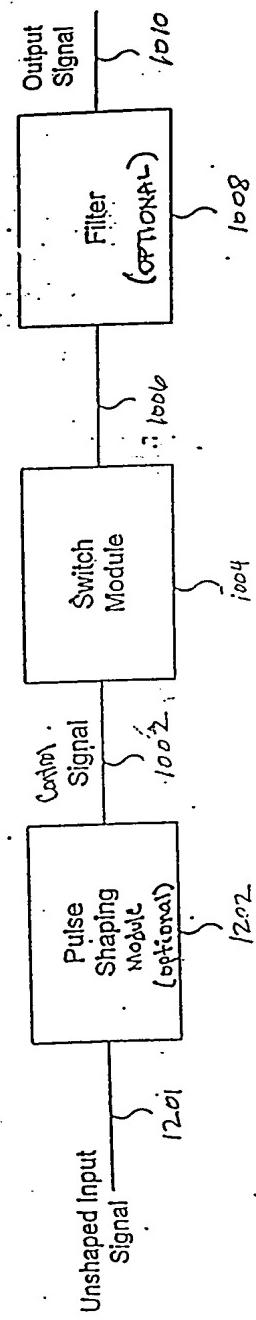


FIG. 12

09855654 09855654

INFORMATION
SIGNAL
1302

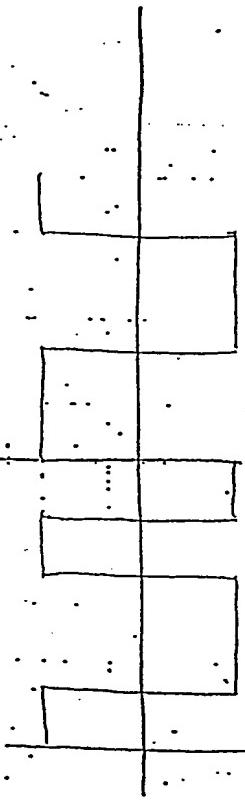


FIG. 13A

OSCILLATING
SIGNAL
1304

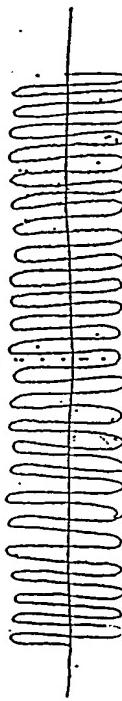


FIG. 13B

FREQUENCY MODULATED
INPUT SIGNAL
1306

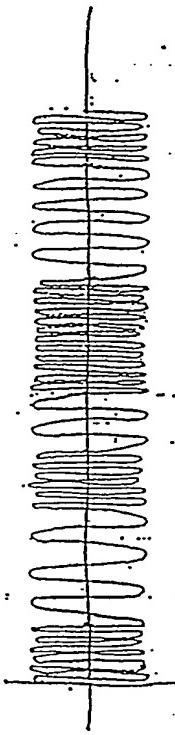
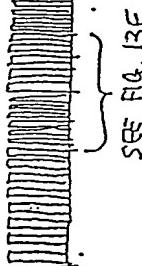


FIG. 13C

HARMONICALLY
RICH SIGNAL
(shown as source wave)
1308

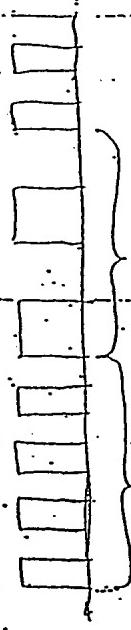


SEE FIG. 13E

FIG.
13

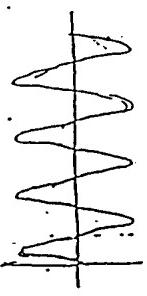
EXPANDED VIEW OF
HARMONICALLY RICH
SIGNAL 1310

(SHOWN SEPARATELY)



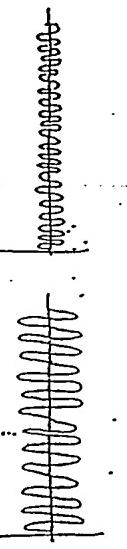
SEE FIG. 1310

HARMONICS OF
SIGNAL 1310
(SHOWN SEPARATELY)



FUNDAMENTAL
FREQUENCY
1310A

SEE FIG. 1310



THIRD HARMONIC
1310B

FIG. 13E

FIG. 13E

FIG. 13E

FIG. 13F

FIG. 13F

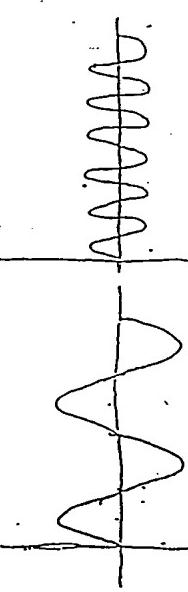
FIG. 13F

FIFTH HARMONIC
1310C

FIFTH HARMONIC
1310C

FIFTH HARMONIC
1310C

HARMONICS OF
SIGNAL 1312
(SHOWN SEPARATELY)



FUNDAMENTAL
FREQUENCY
1312A

FIG. 13G

FIFTH HARMONIC
1312C

FIFTH HARMONIC
1312C

FIFTH HARMONIC
1312C

FIG. 13 (cont)

REPORT NO. 13-55555

HARMONICS OF
SIGNALS 1310 AND
1312, (SHOWN
SIMULTANEOUSLY BUT
NOT SUMMED)

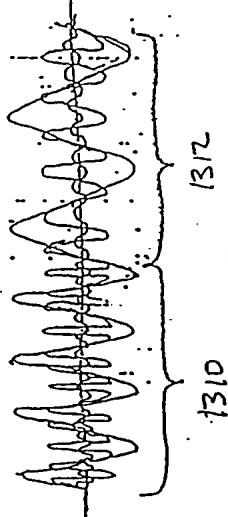


FIG. 13H

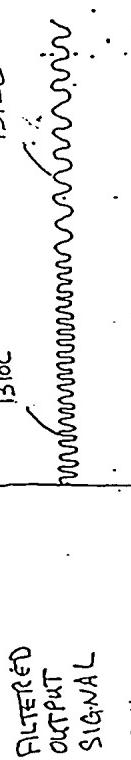


FIG. 13I

FIG. 13 (cont.)

Unified Downconverting and
Filtering (UDF) Module 1402

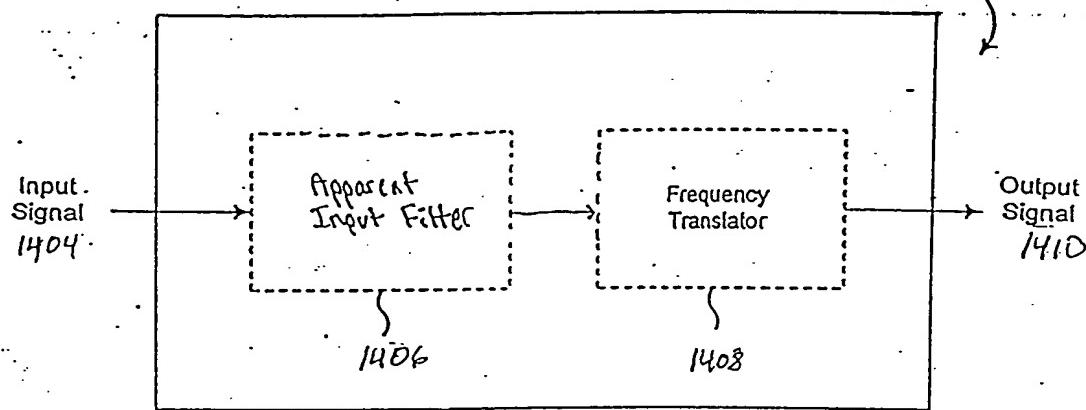


FIG. 14

FIGURE F-350

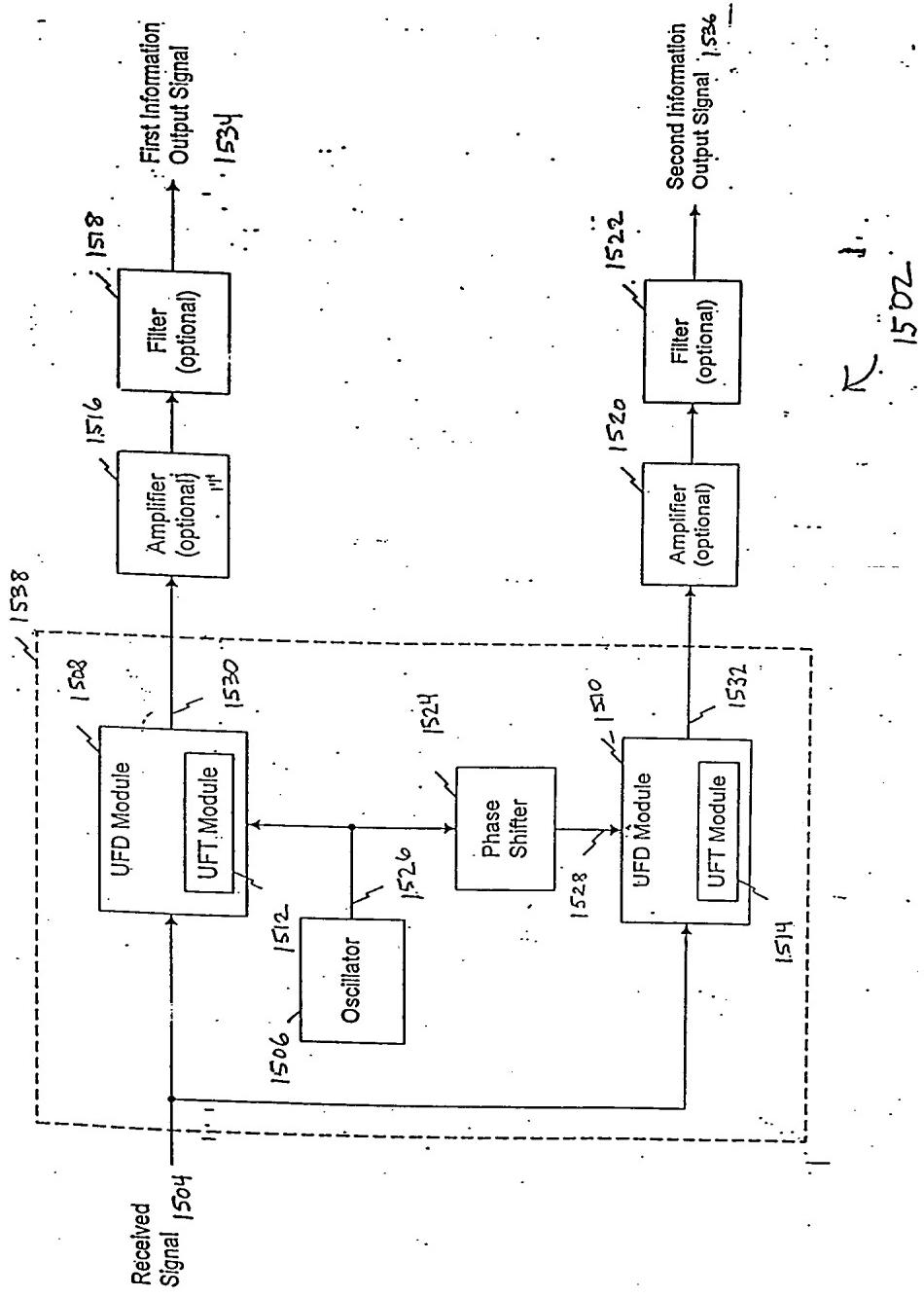


FIG. 15

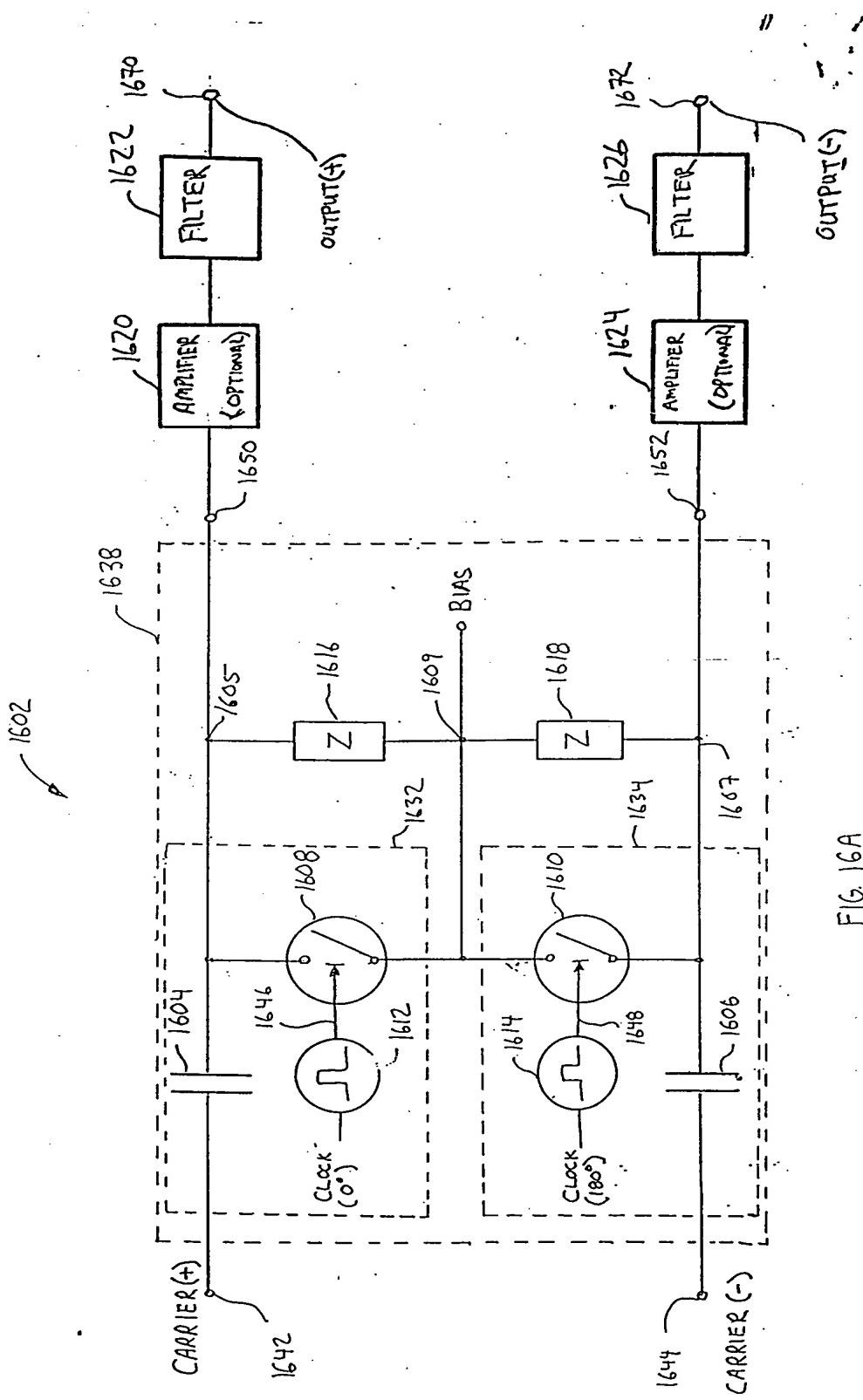


FIG. 16A

TC039475 • 0555555555555555

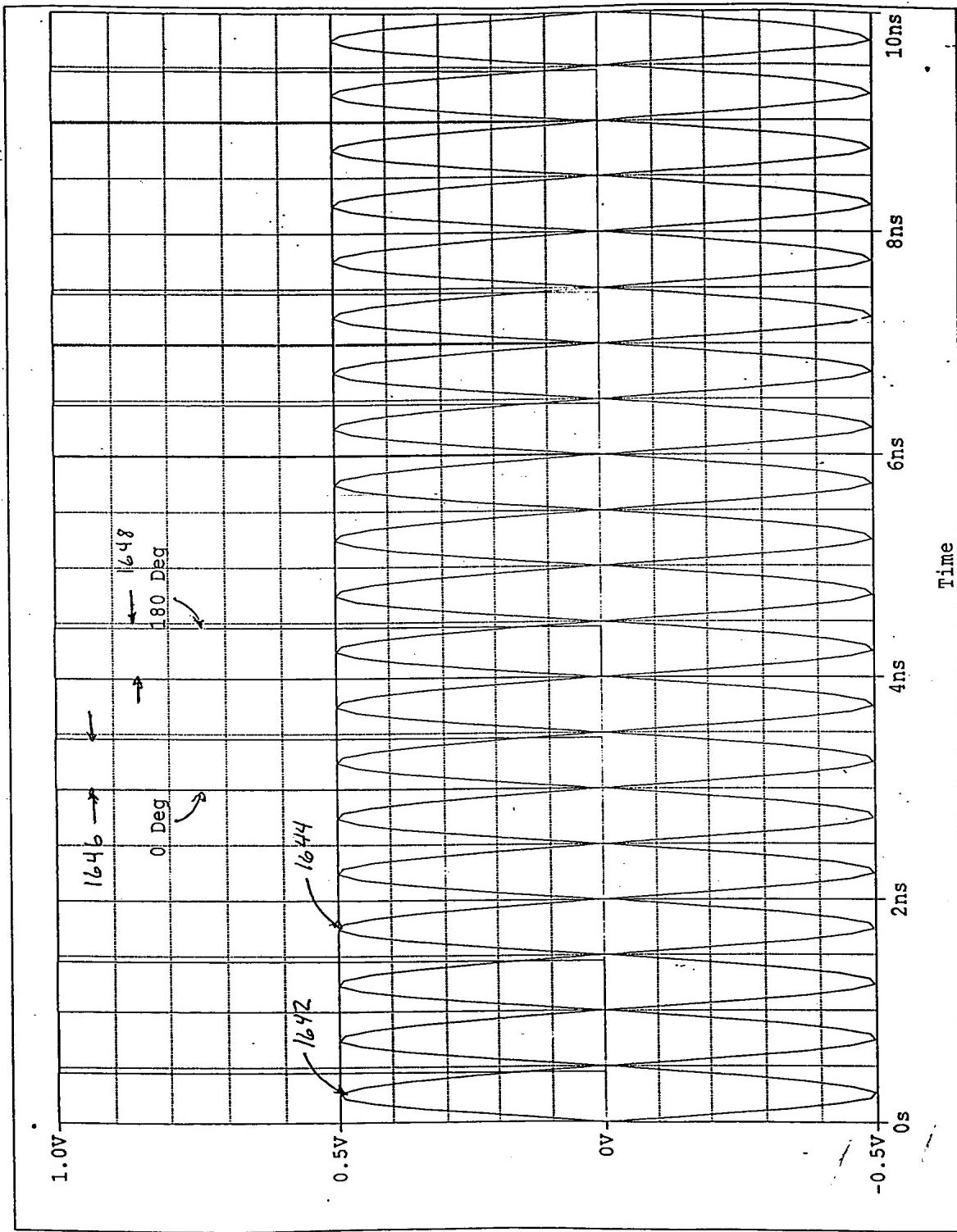


FIG. 16 B

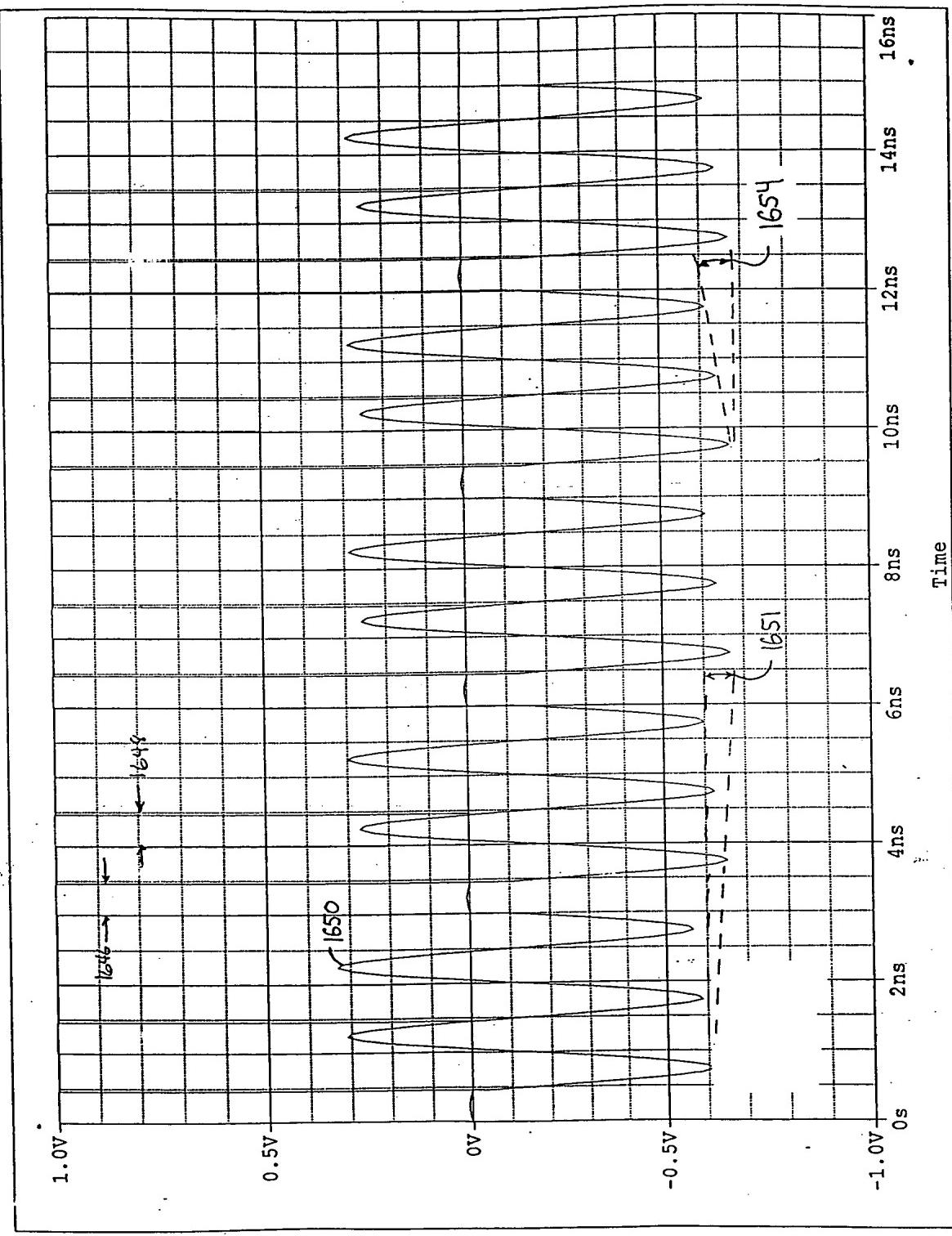
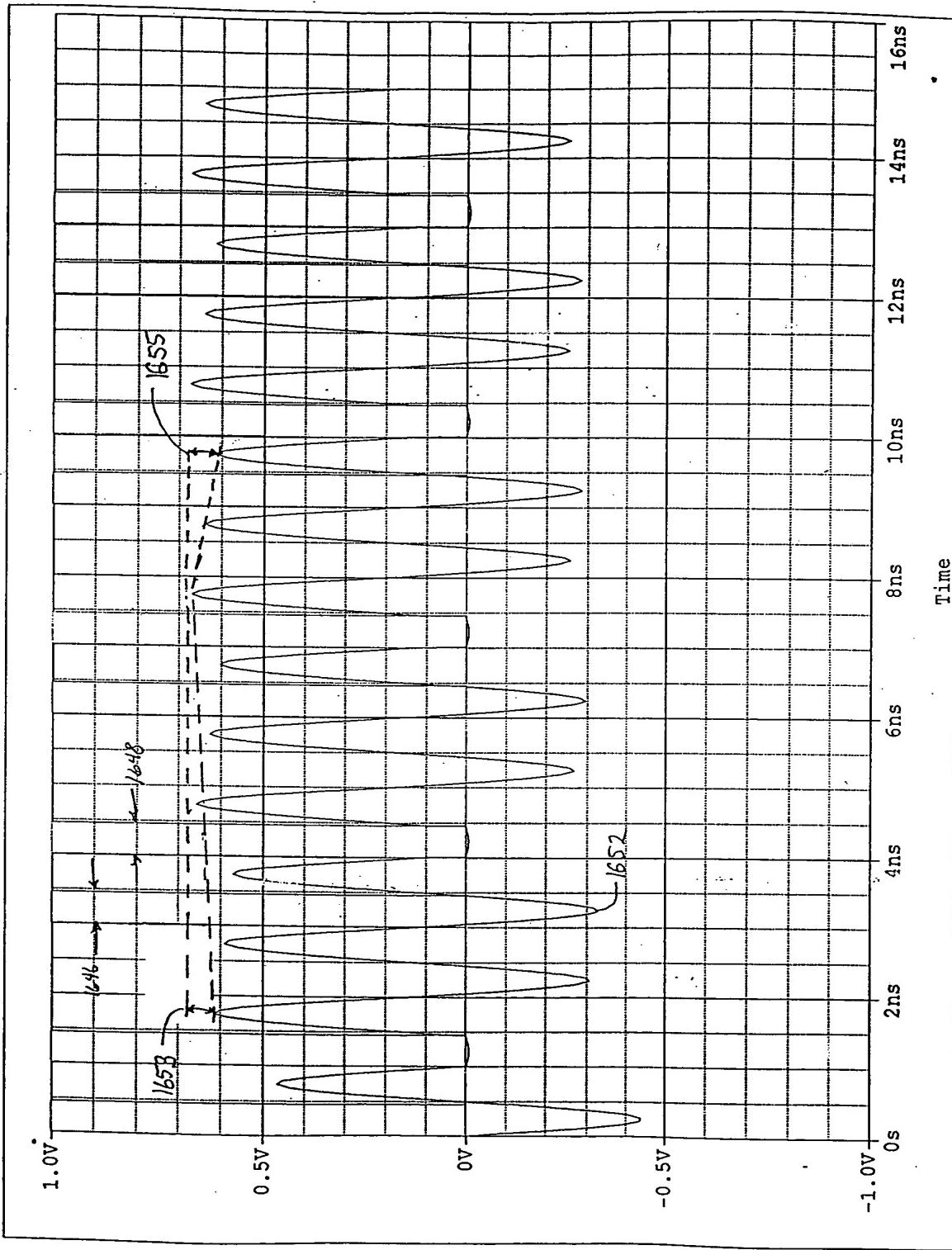


FIG. 16C

FIG. 16D



1975-05-25 09:55:00

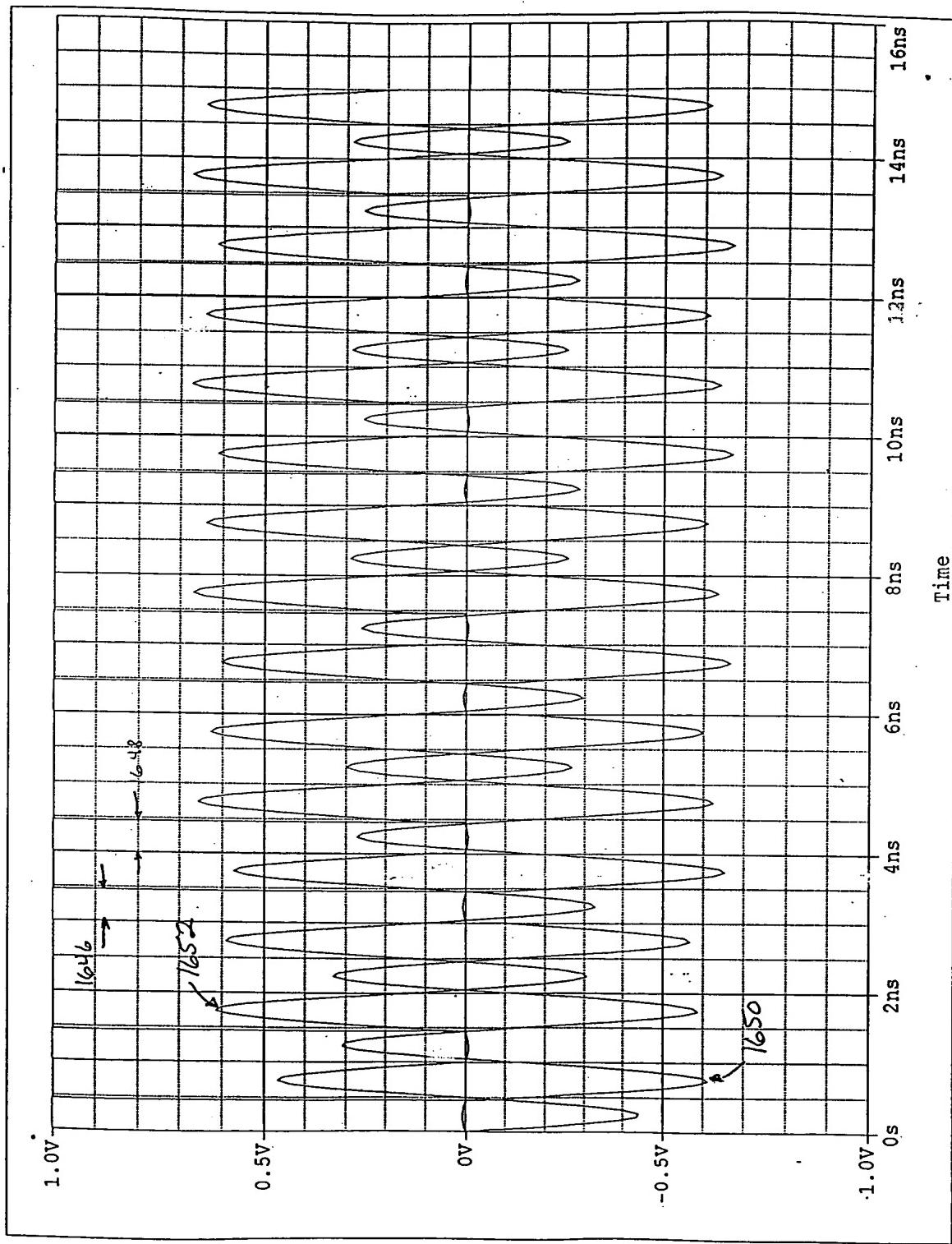


FIG 16 E

1650 1652 1654 1656

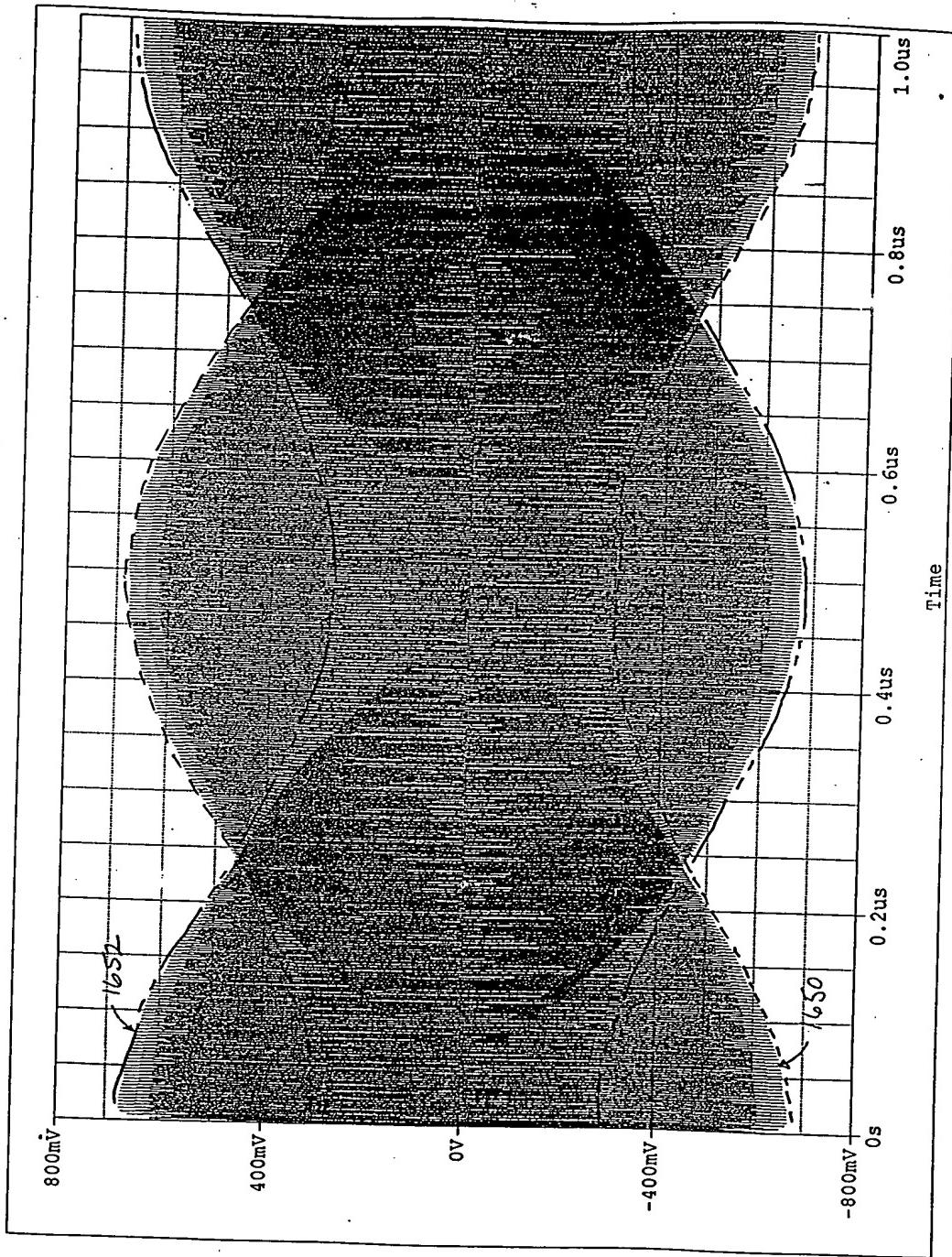


FIG. 16 F

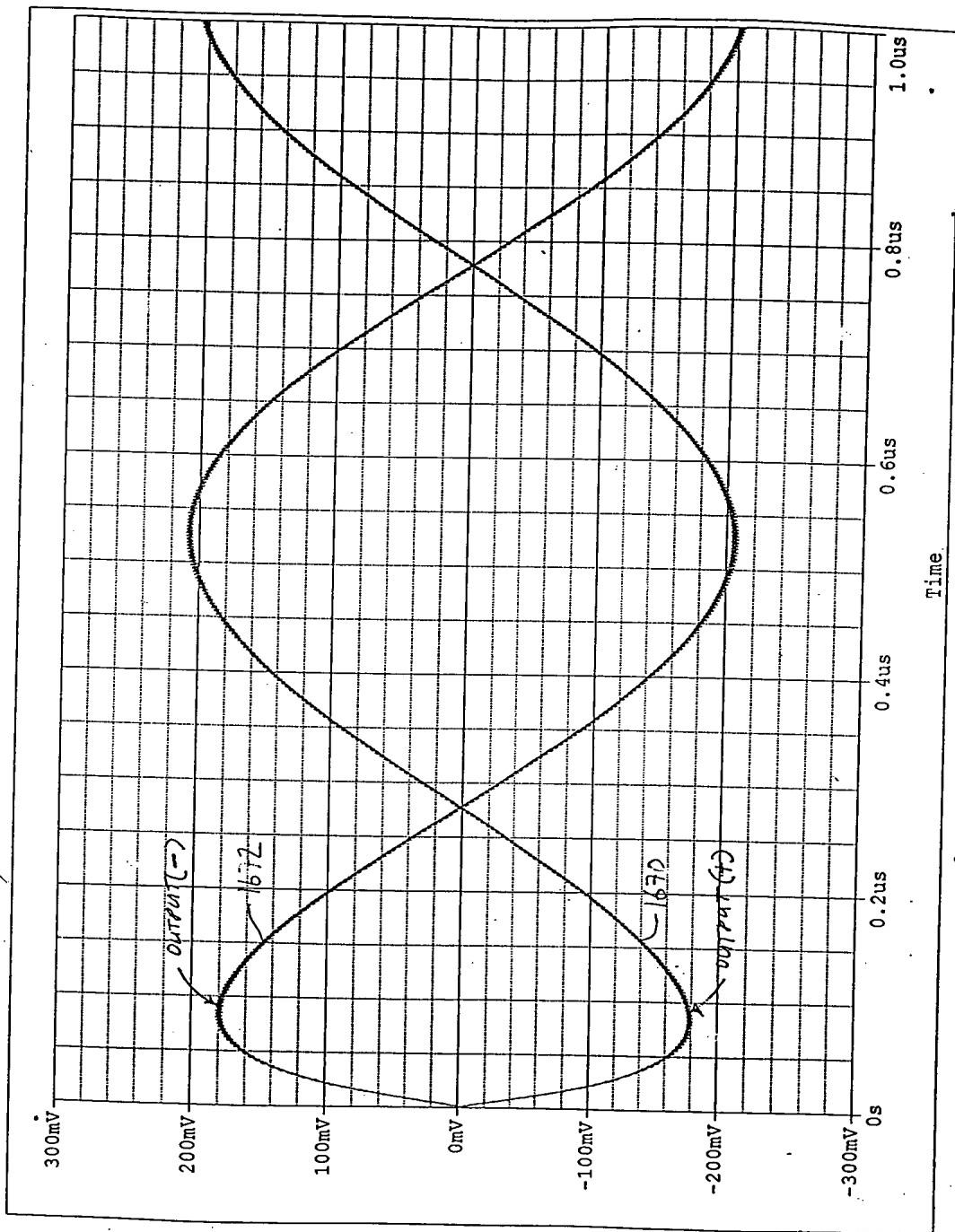


FIG. 16 6

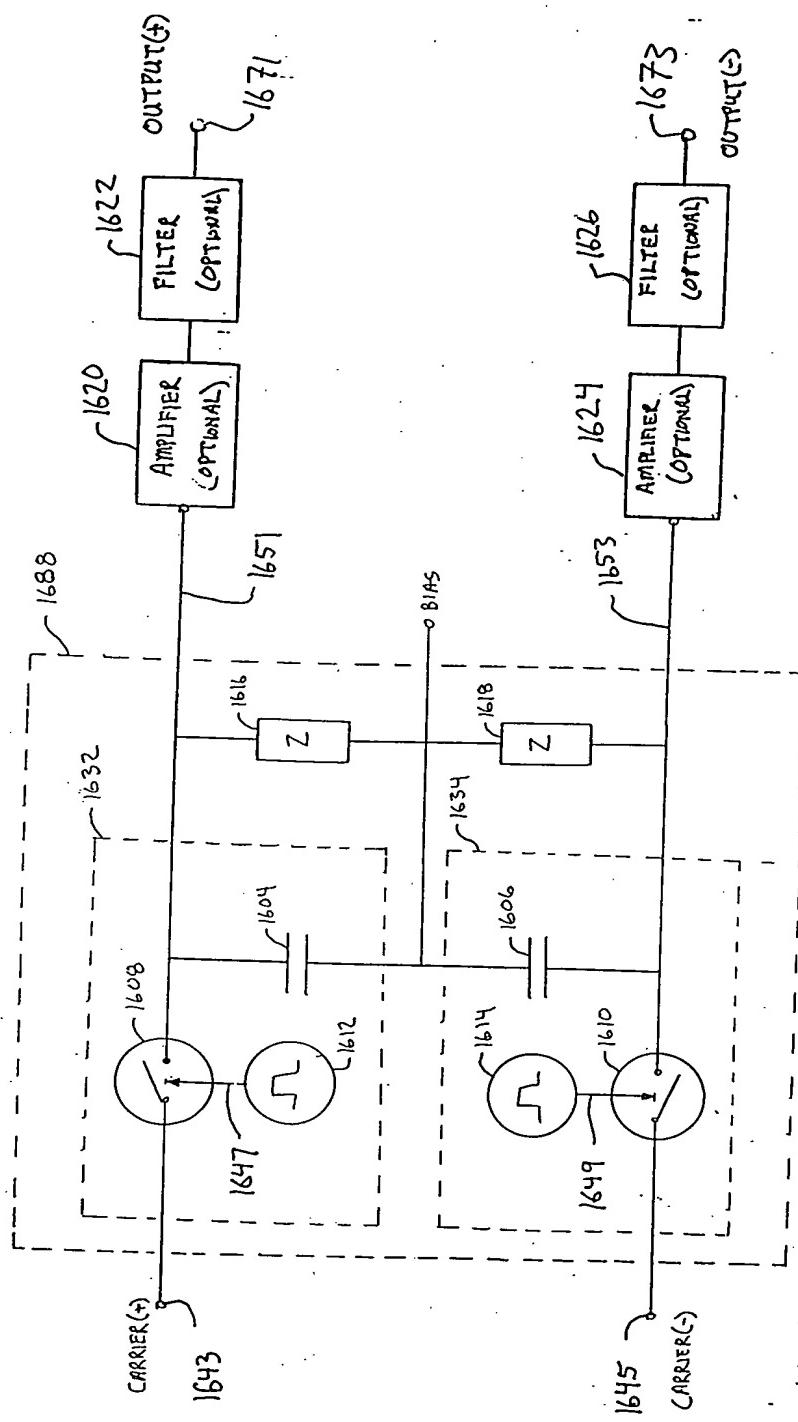


FIG. 16H

09885351 051601

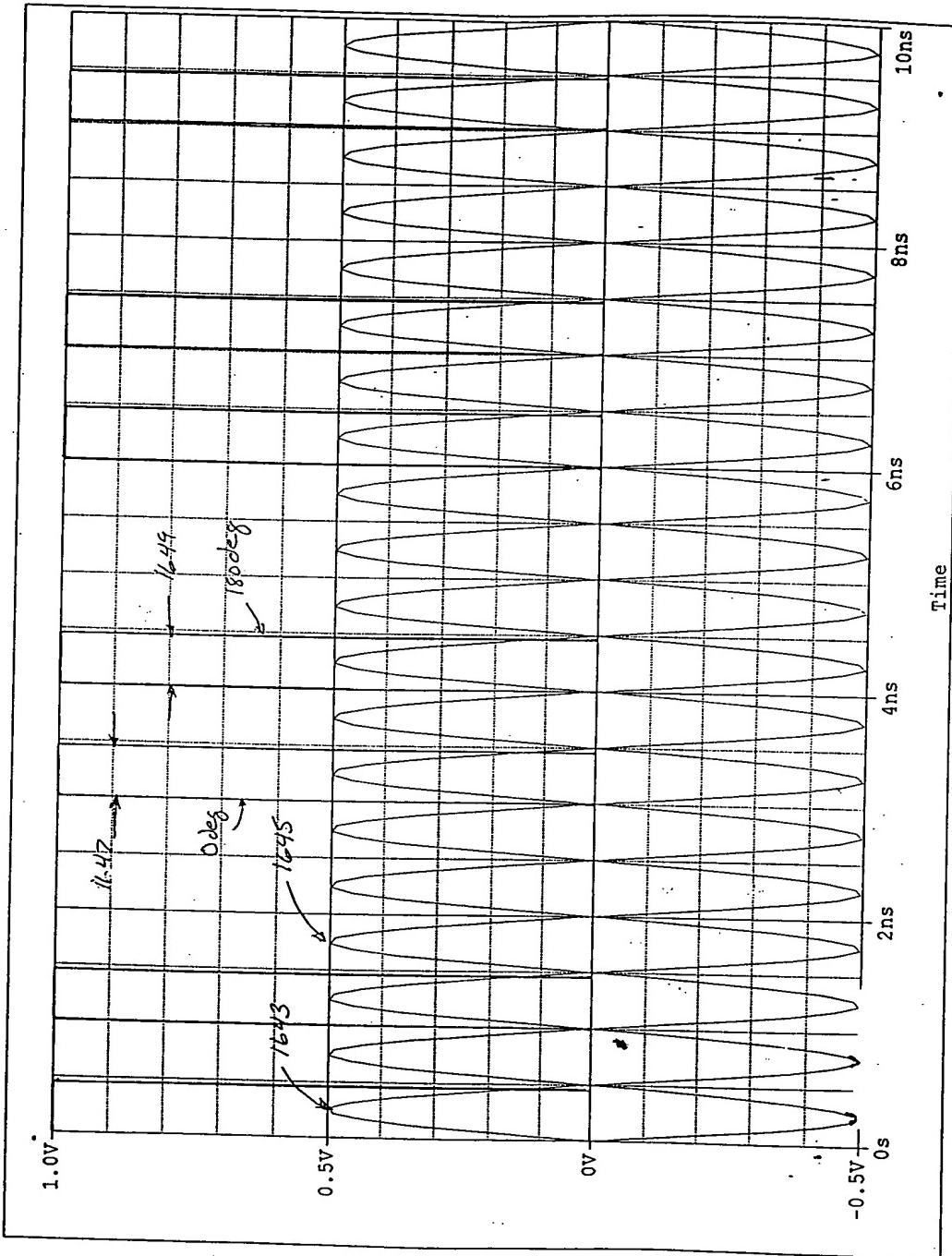


Fig. 16I

0.6V 0.8V 1.0V

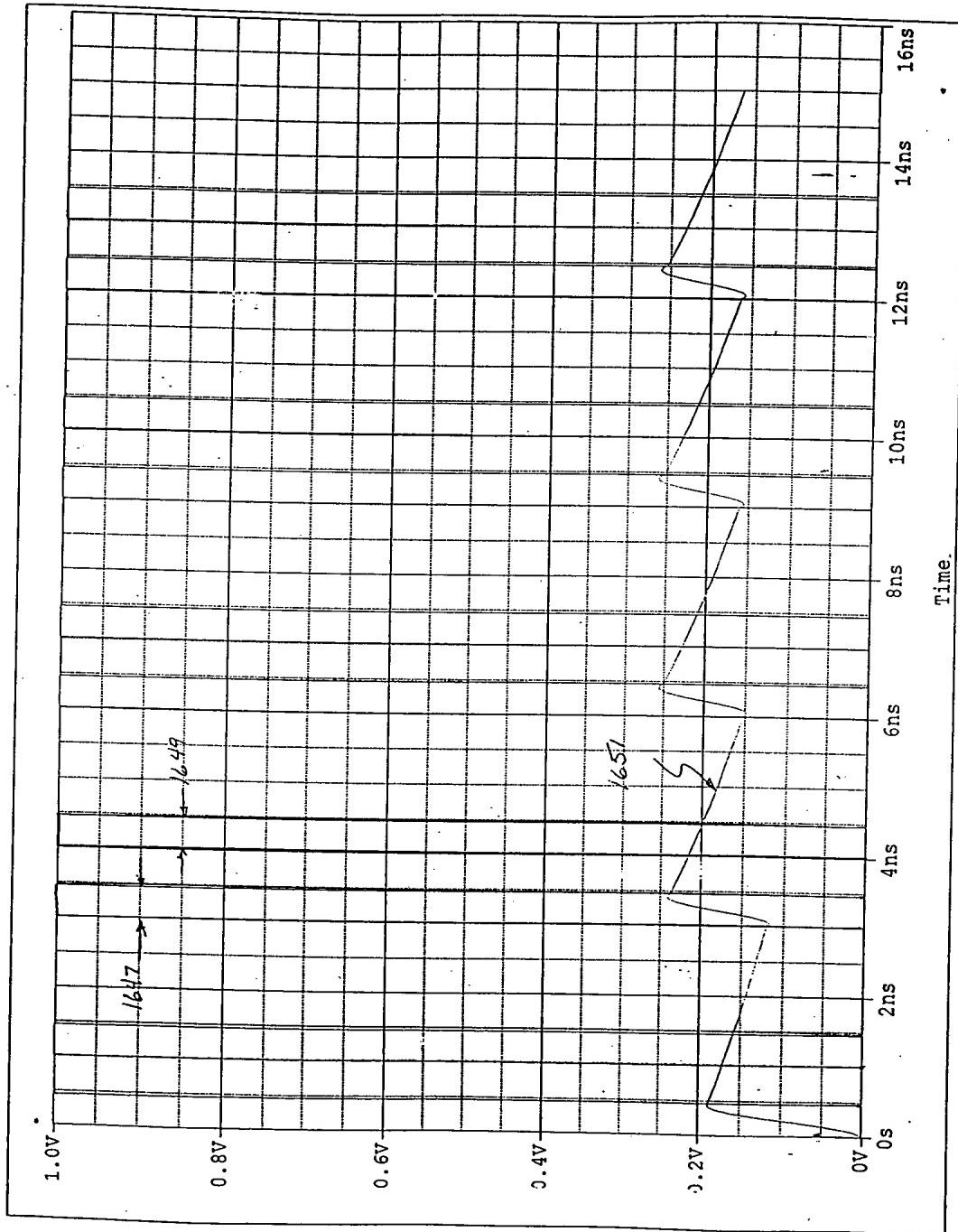
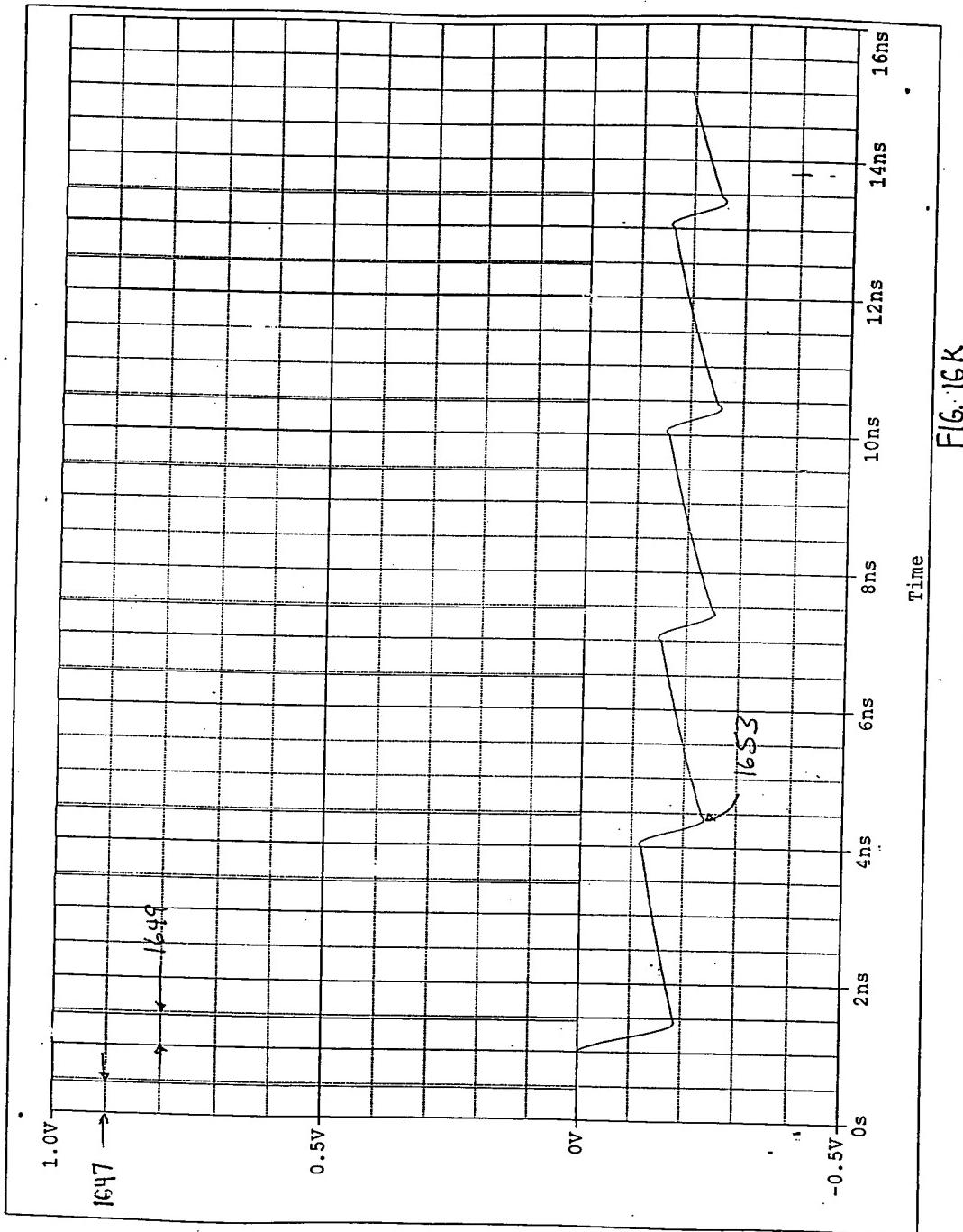
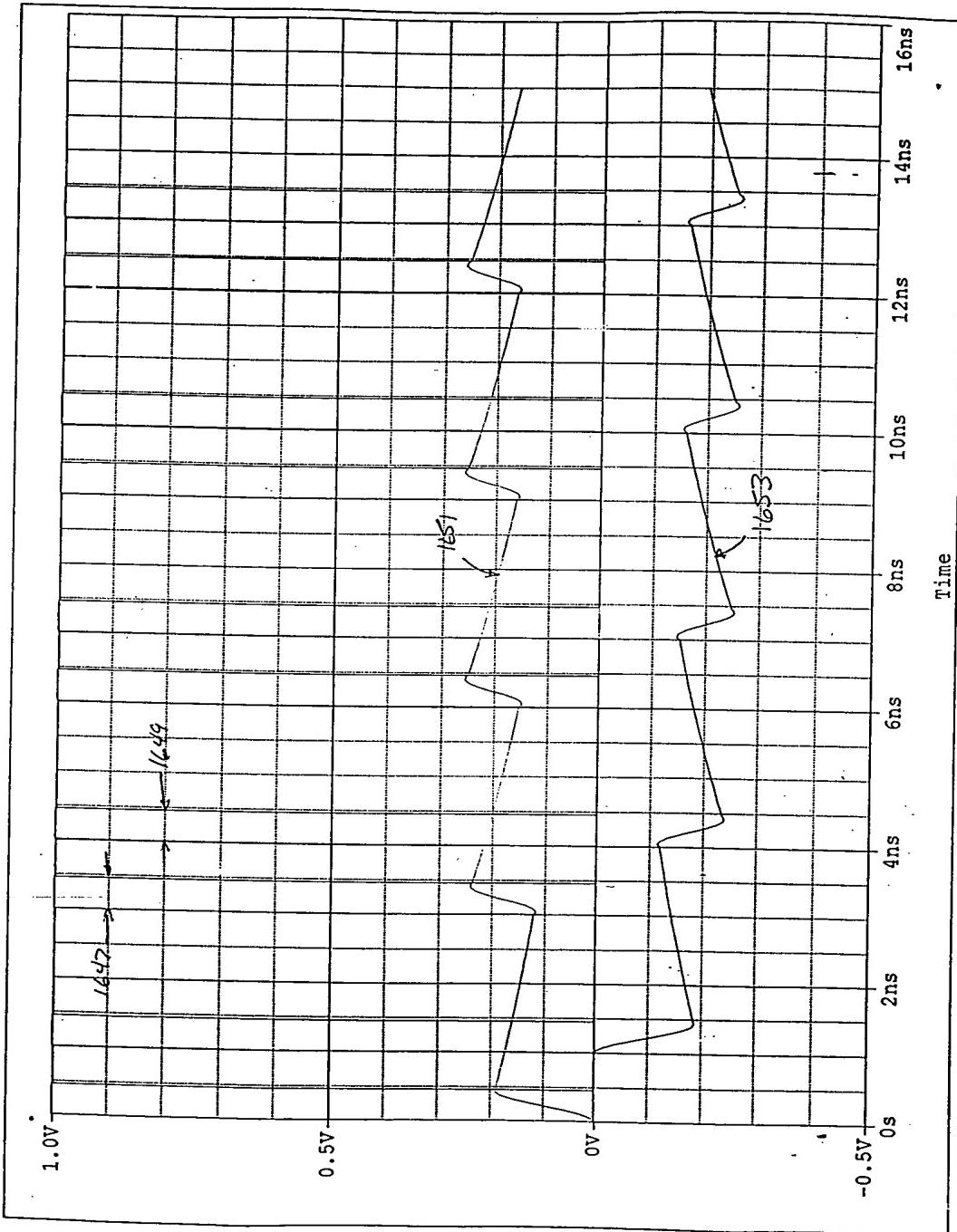


Fig. 16J

CONFIDENTIAL - FEDERAL BUREAU OF INVESTIGATION



0.95 0.90 0.85 0.80 0.75 0.70



F16. 16L

0.9666666666666667

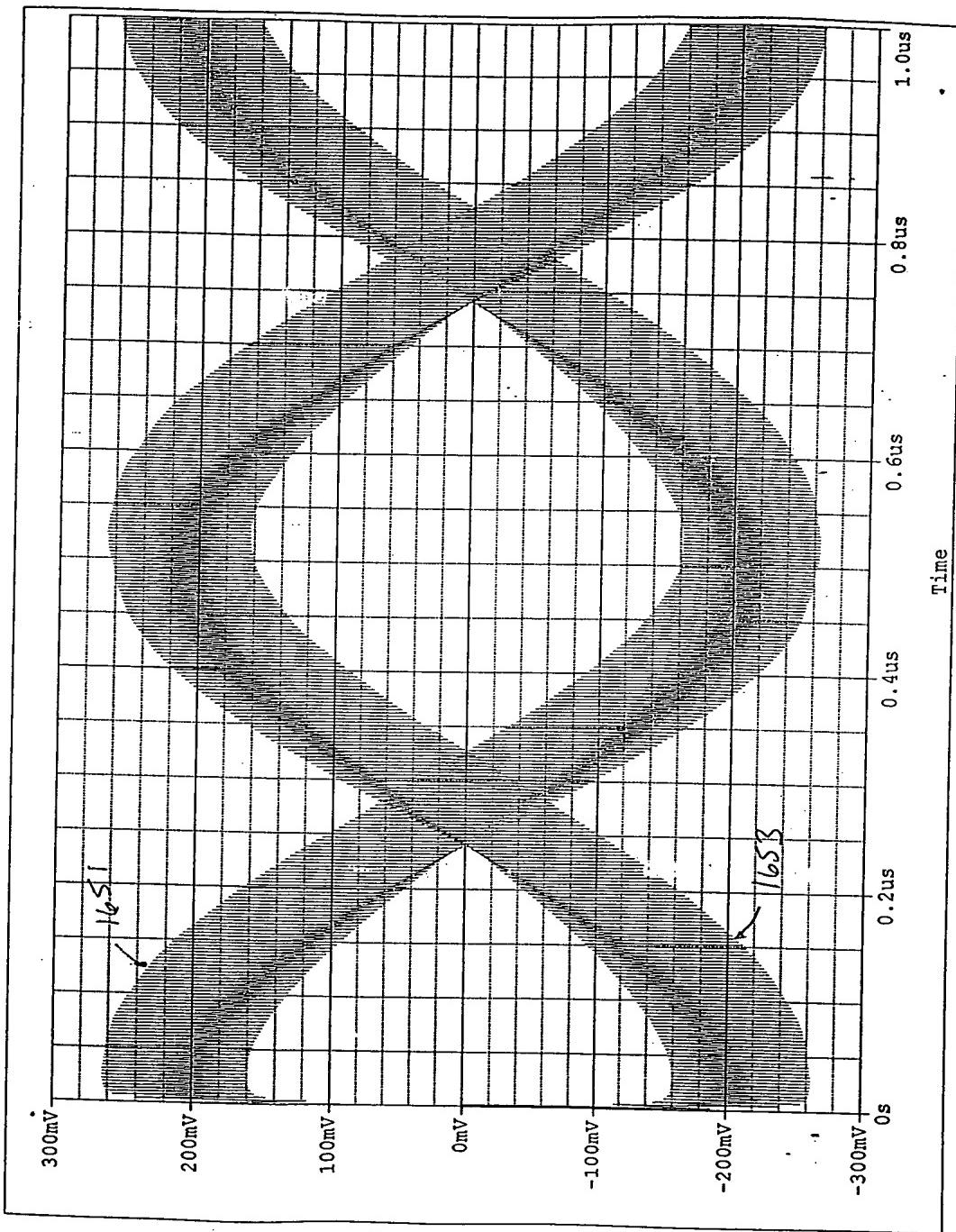


FIG. 16M

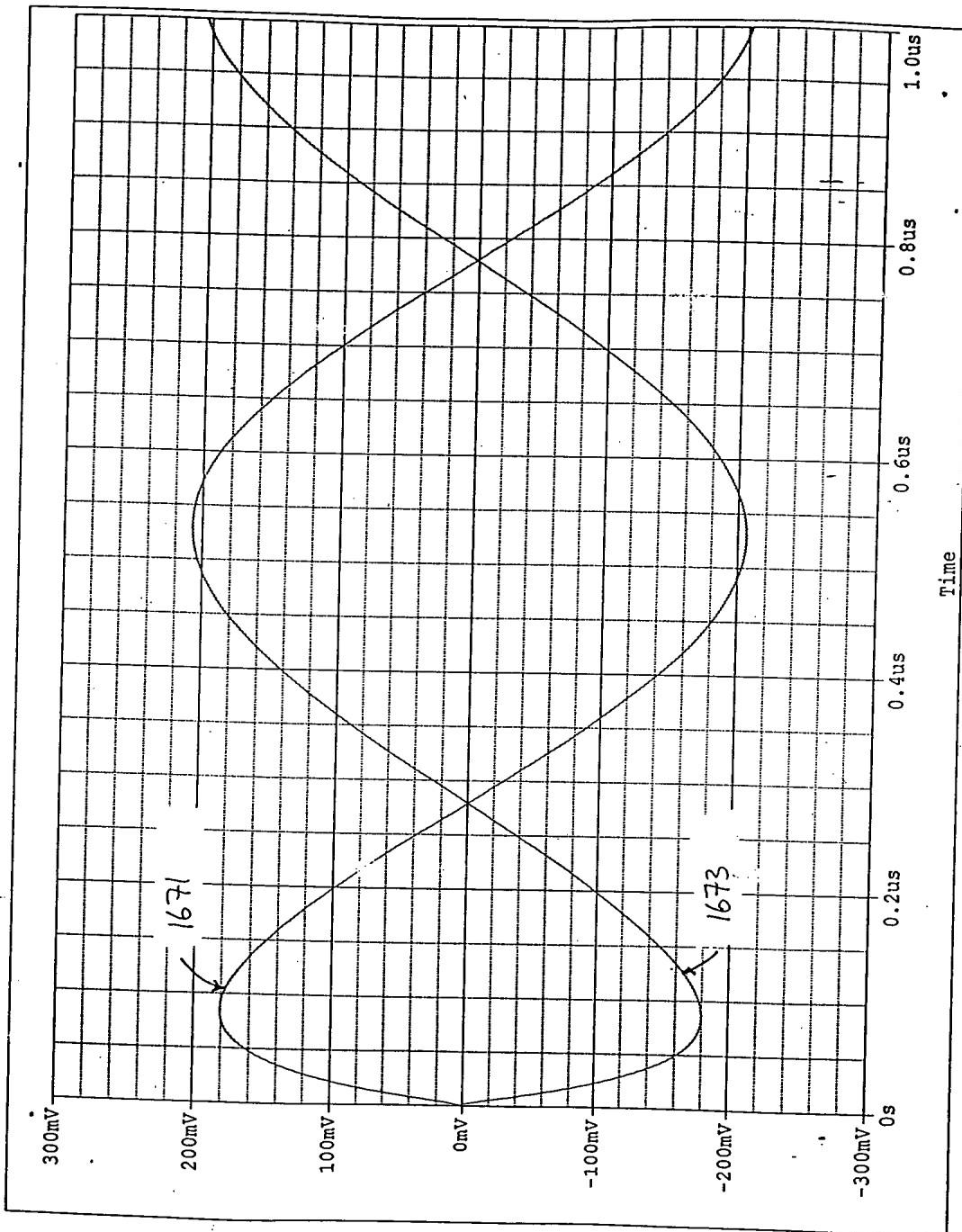


FIG. 16N

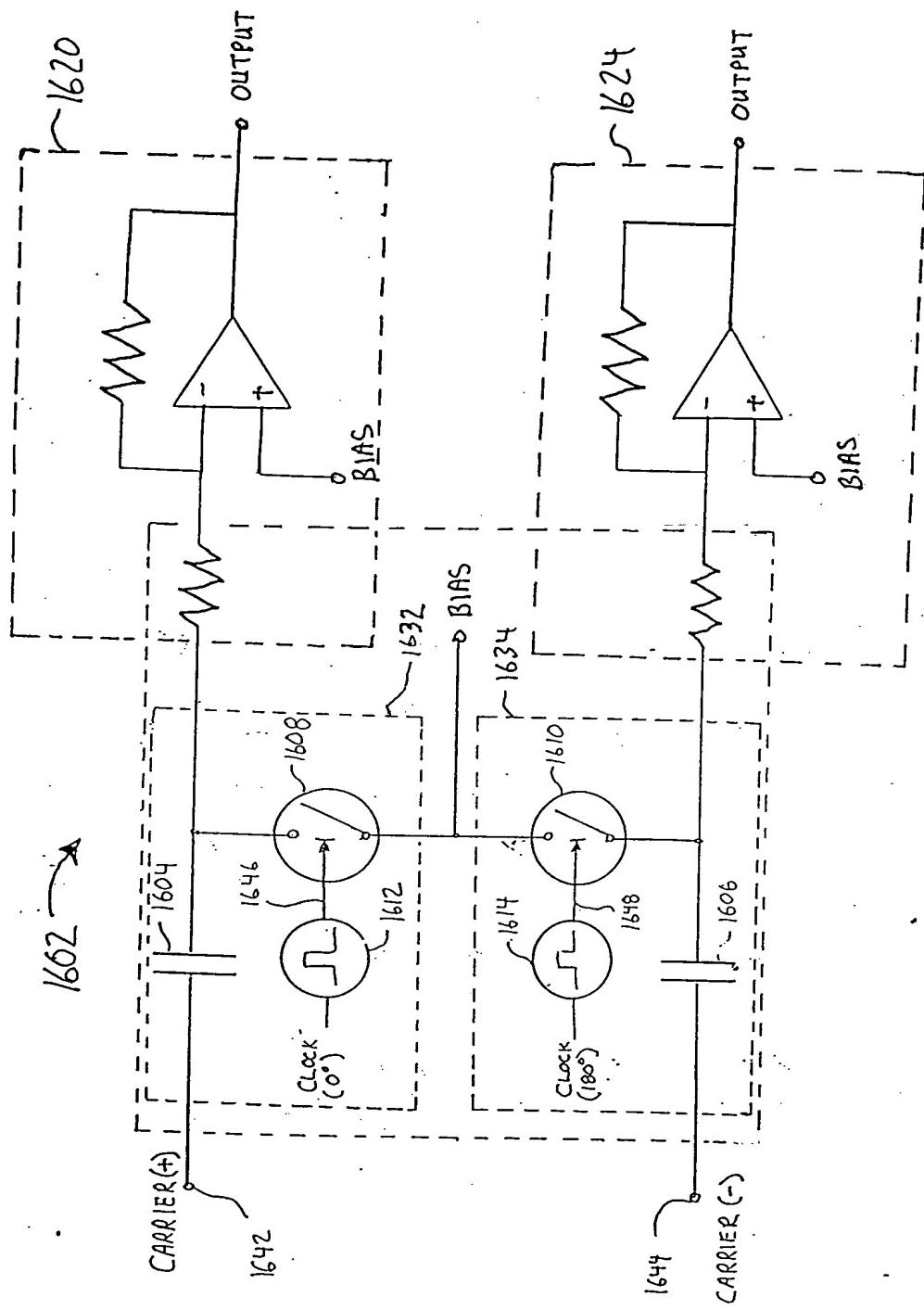
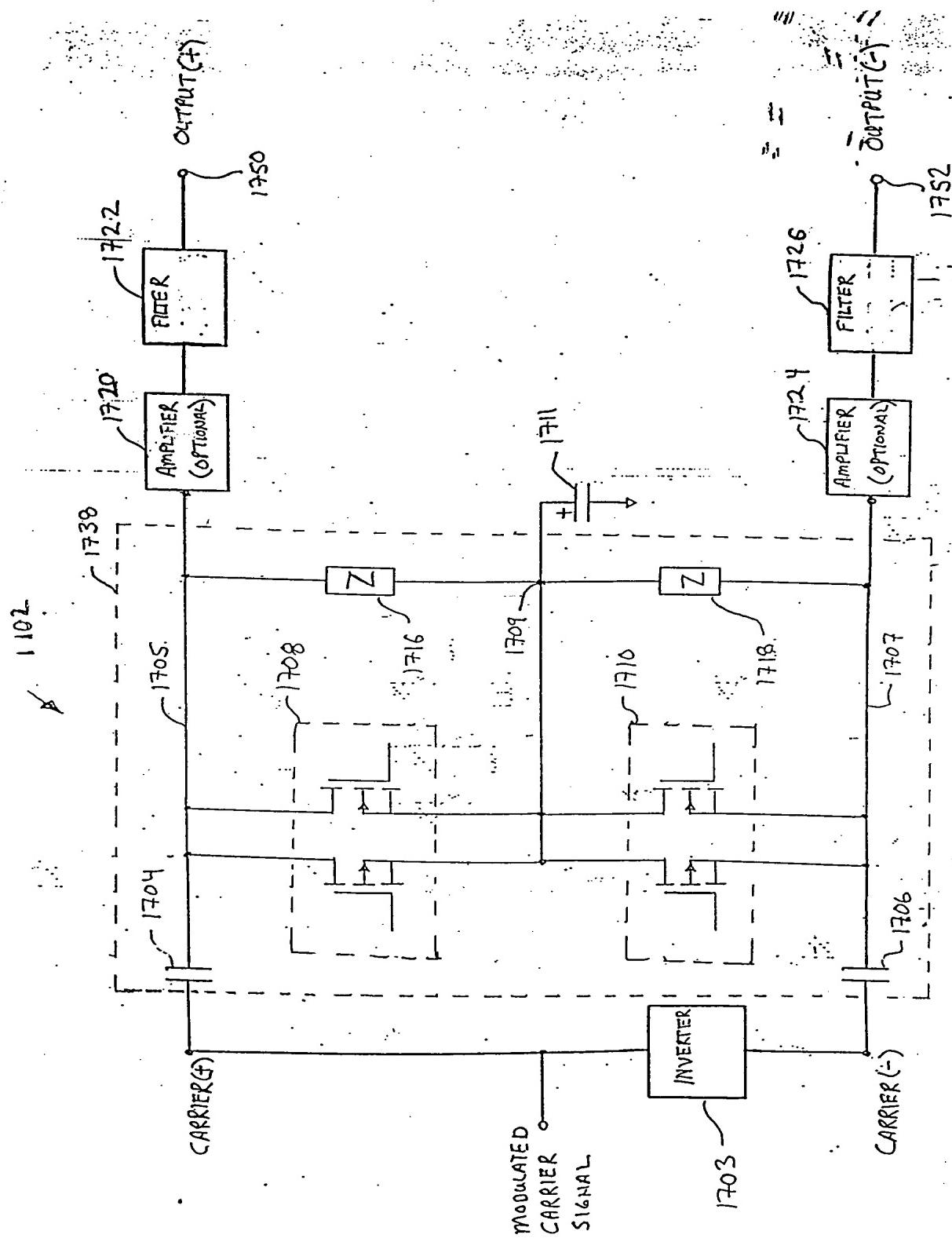


FIG: 160

1102 1704 1705 1706 1707 1708 1709 1710 1711 1716 1718 1722 1724 1726 1738 1750 1752



F16, 17

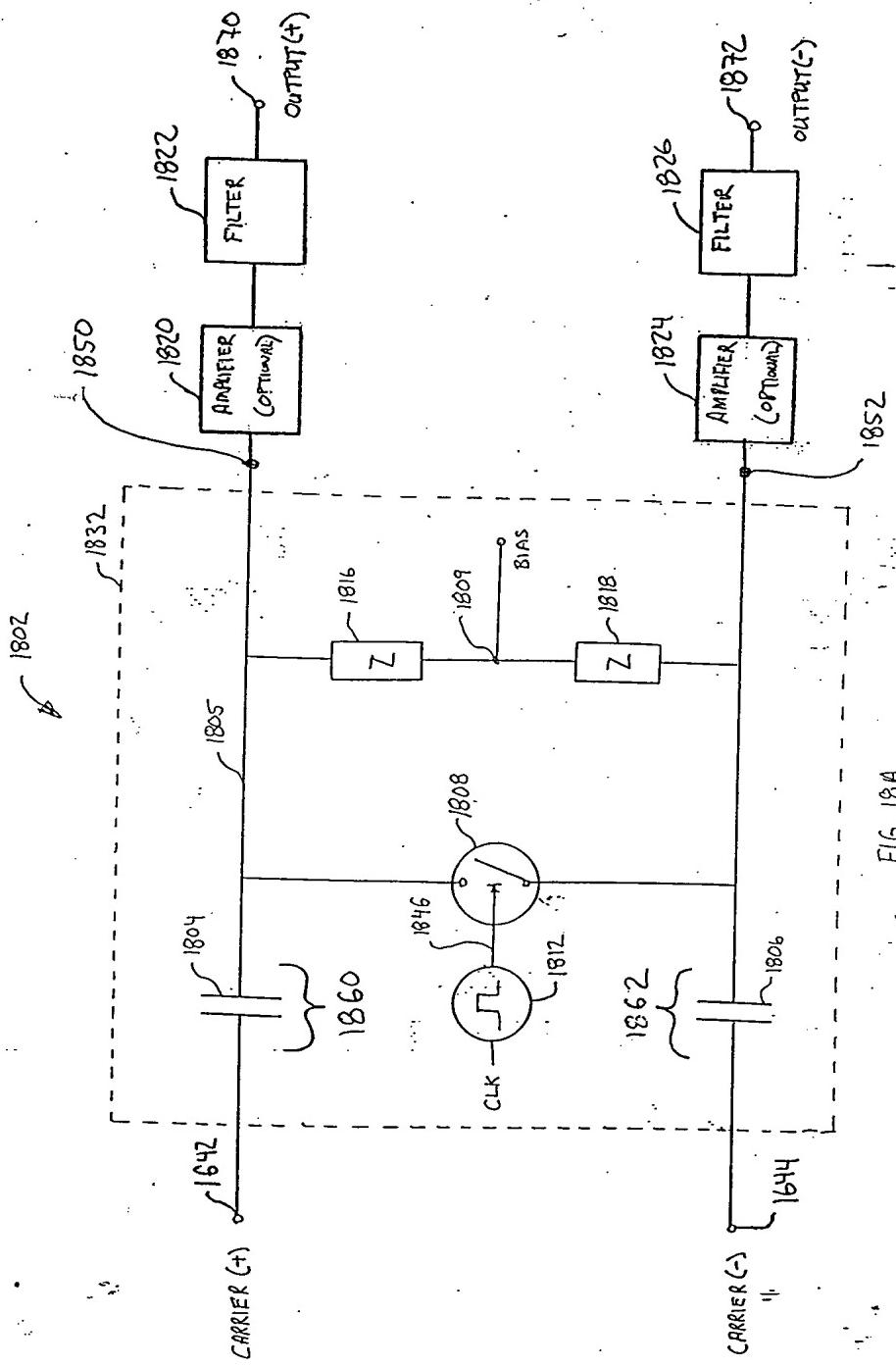


FIG. 18A

"T GAGE" PEGGEE

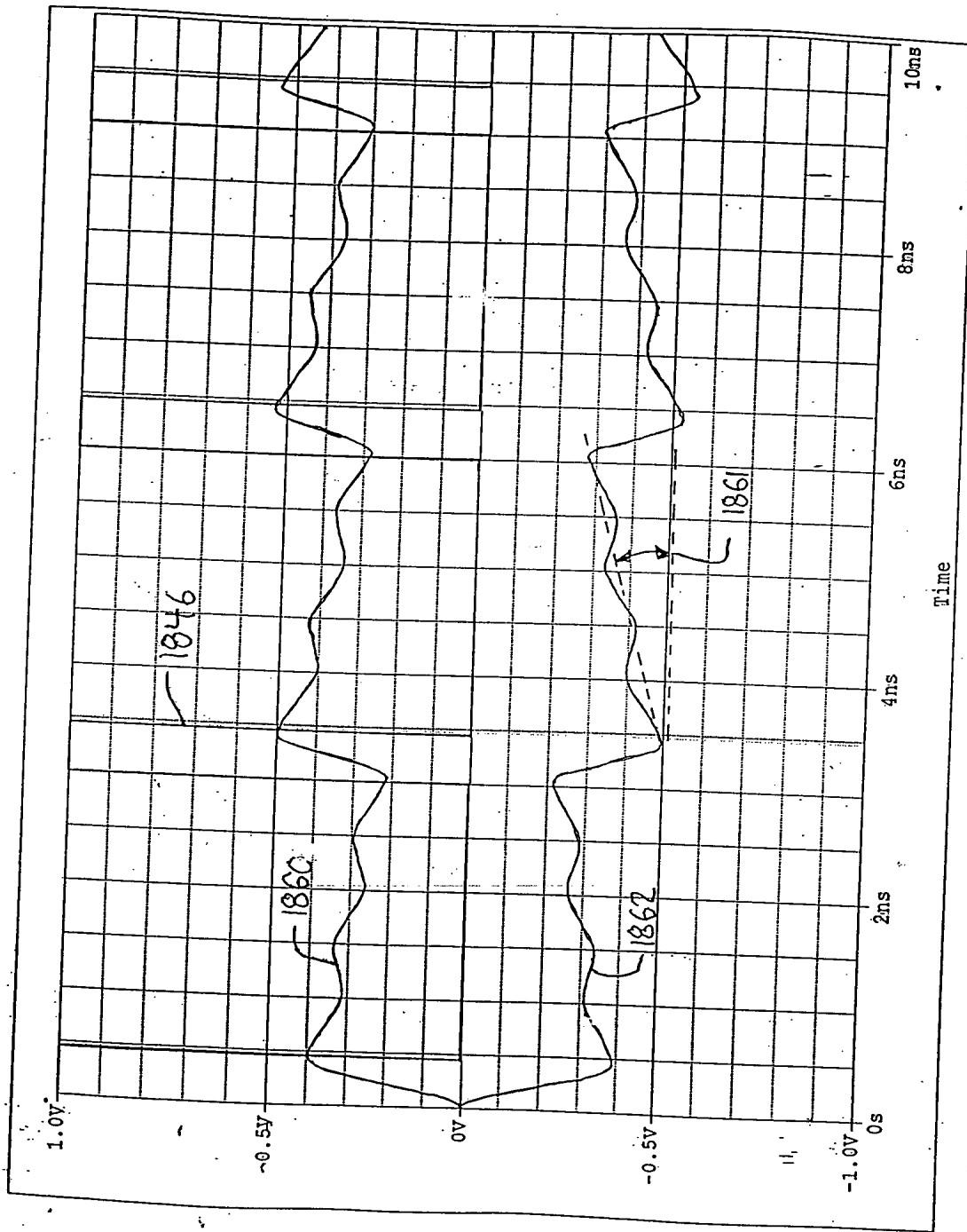


FIG. 18B

092656341 091510

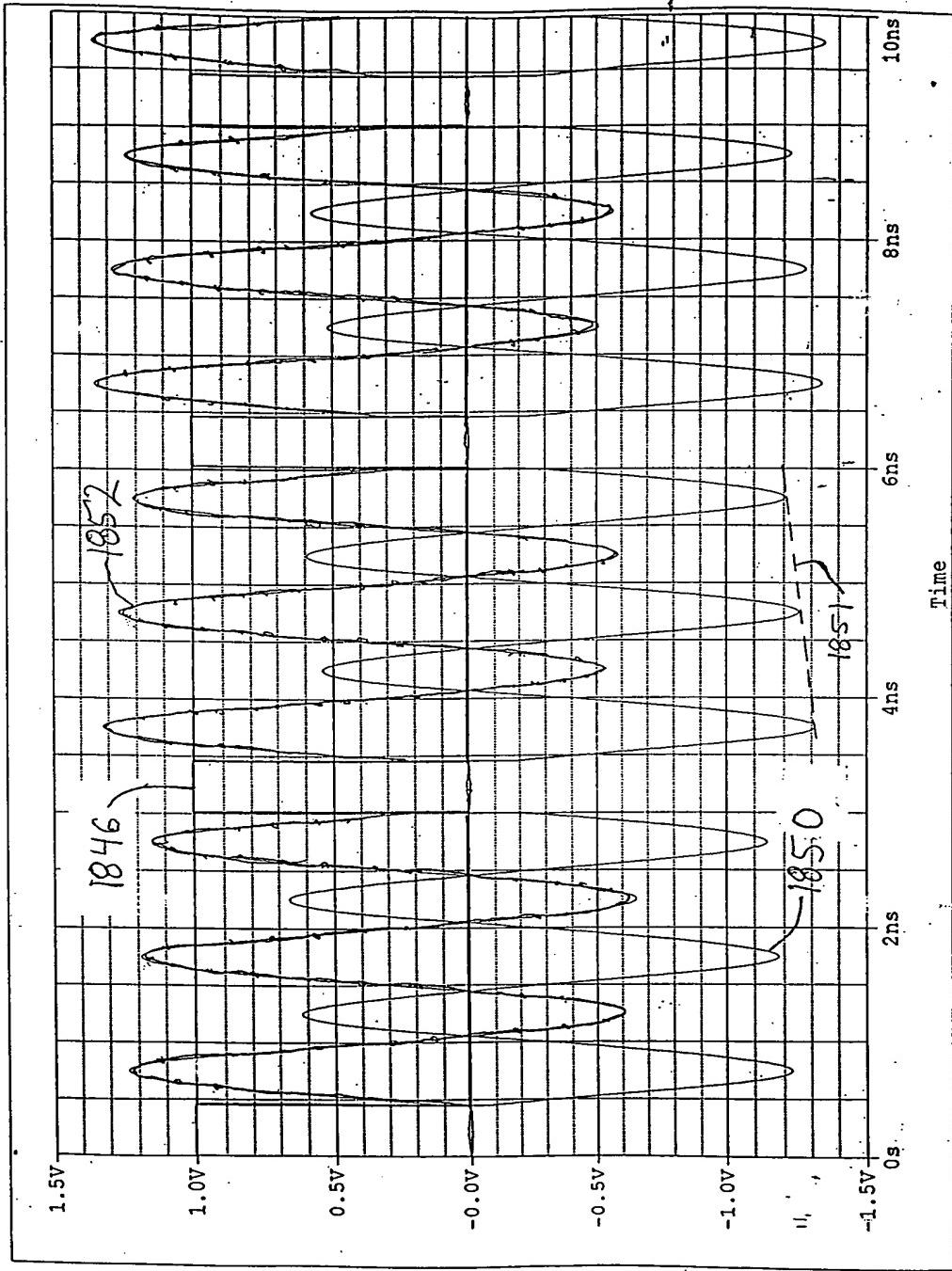


FIG. 18C

000000000000000000000000

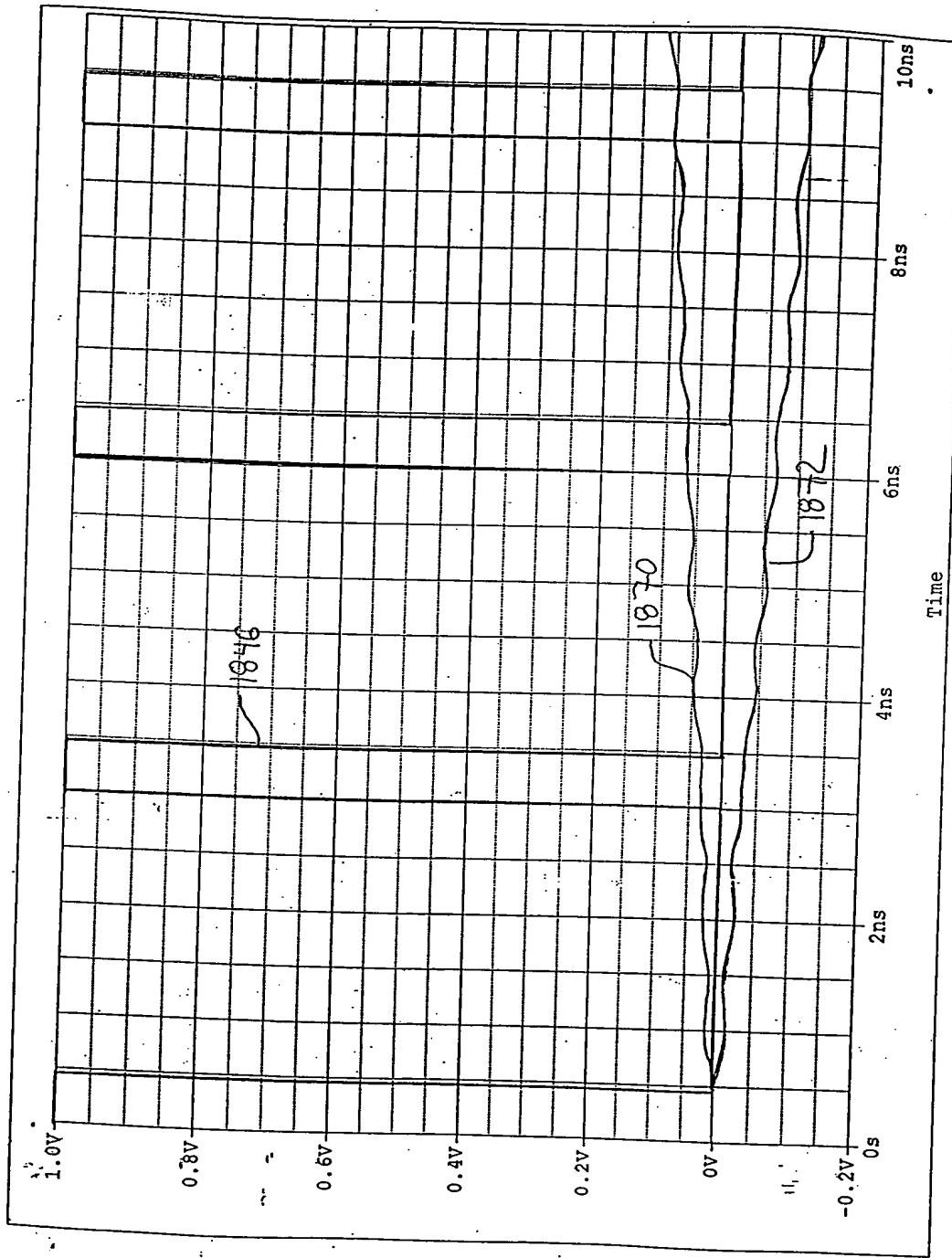


FIG. 18D

09855854 051603

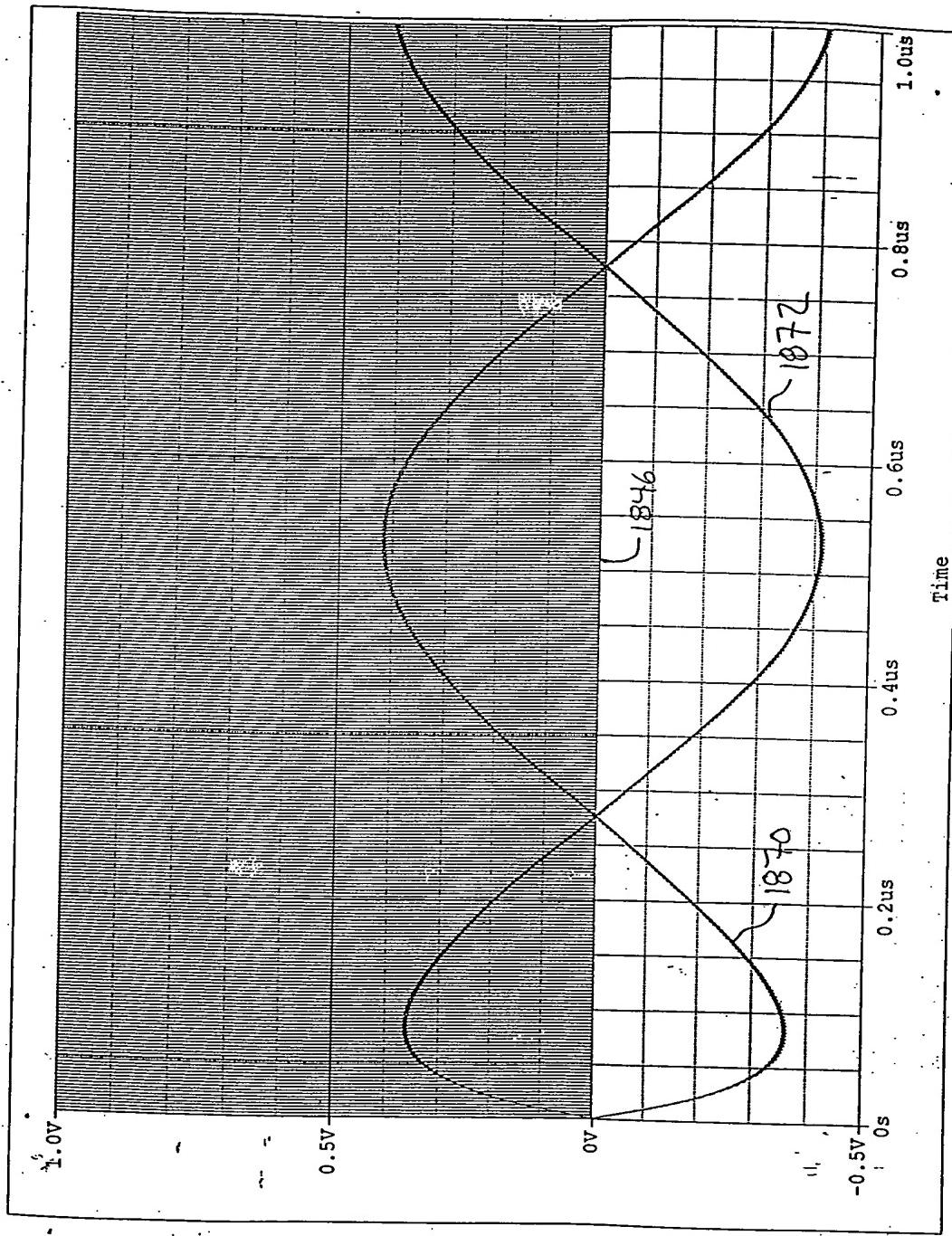


FIG. 18E

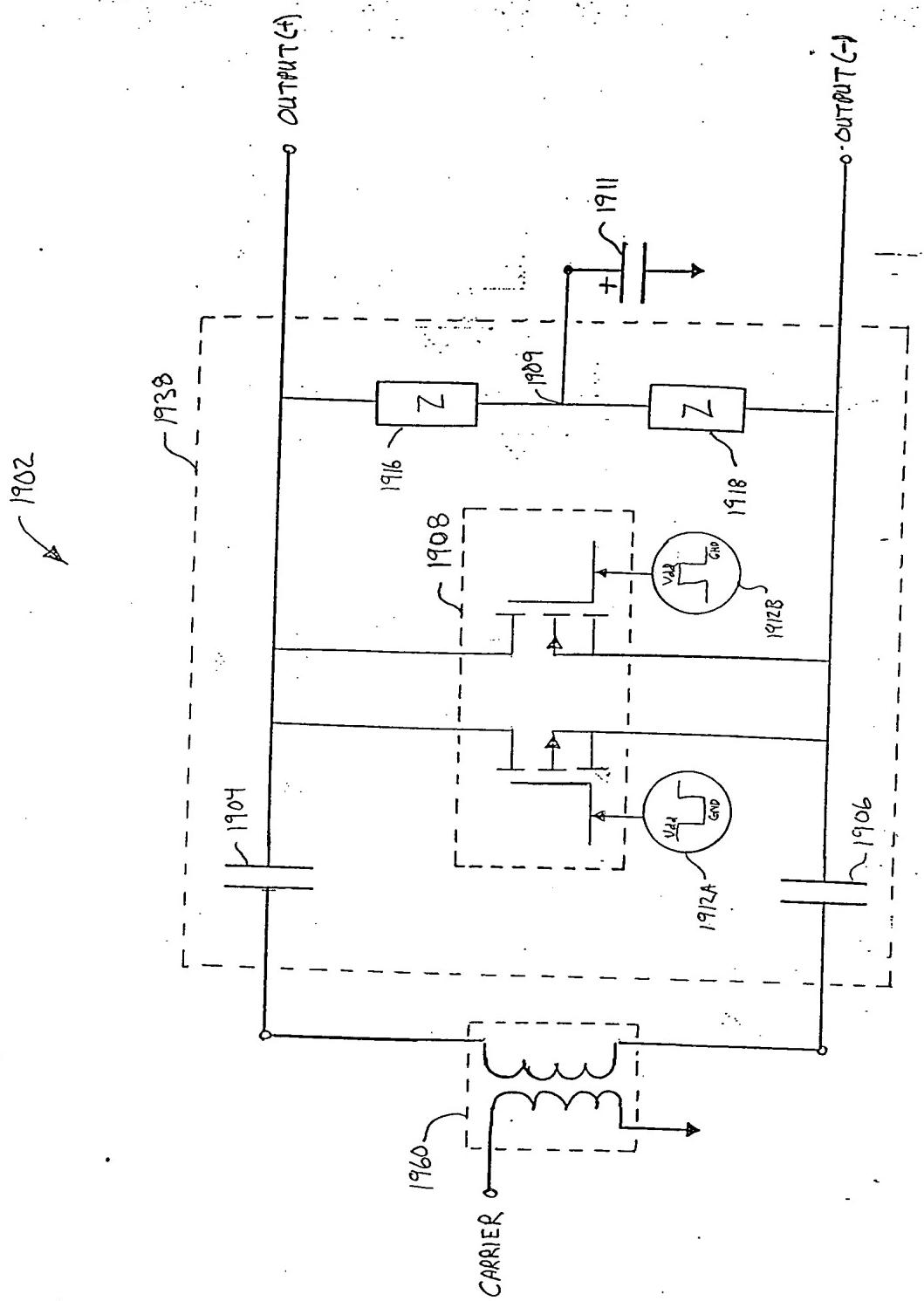


FIG. 19

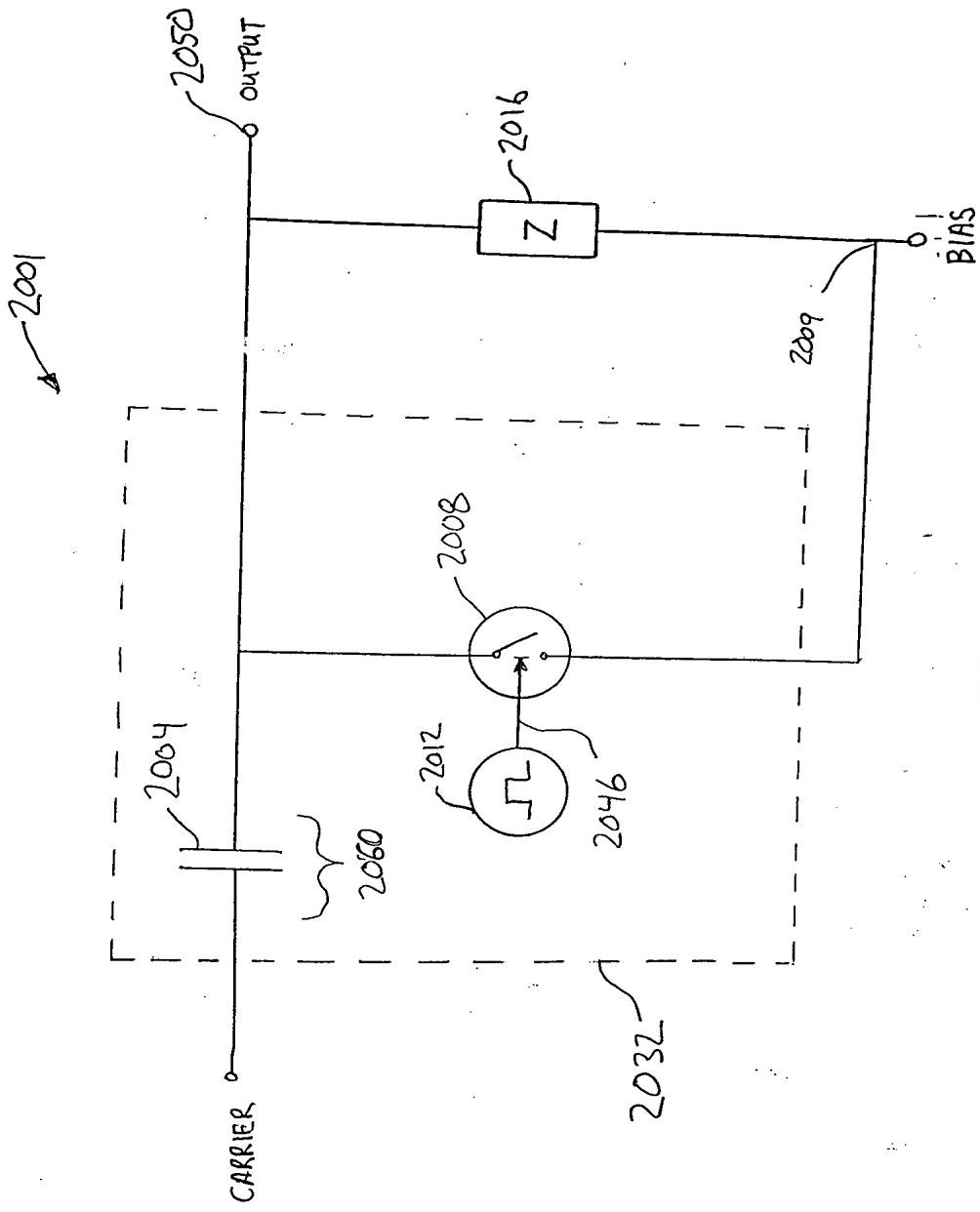


FIG. 20A

7004759 075555860

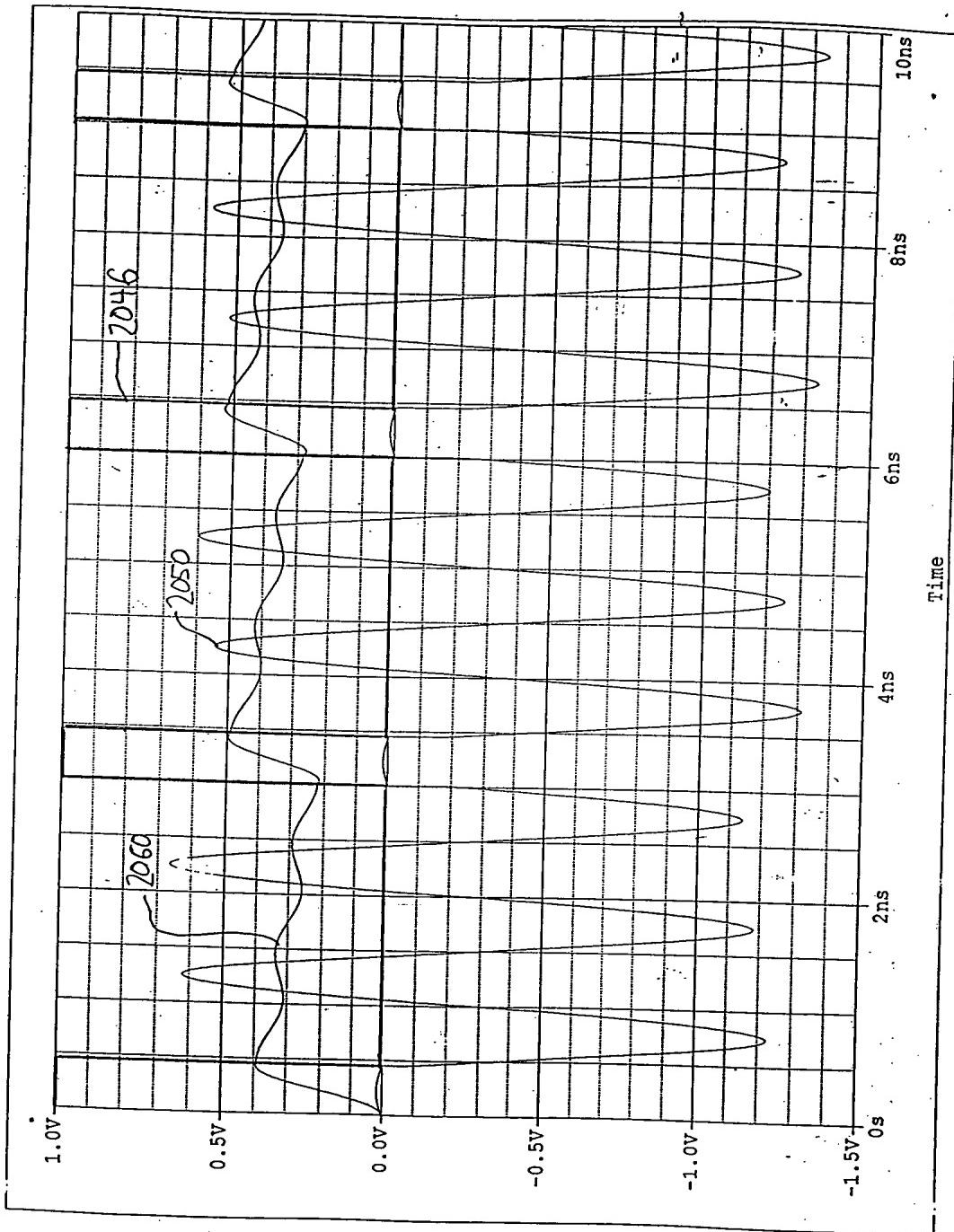
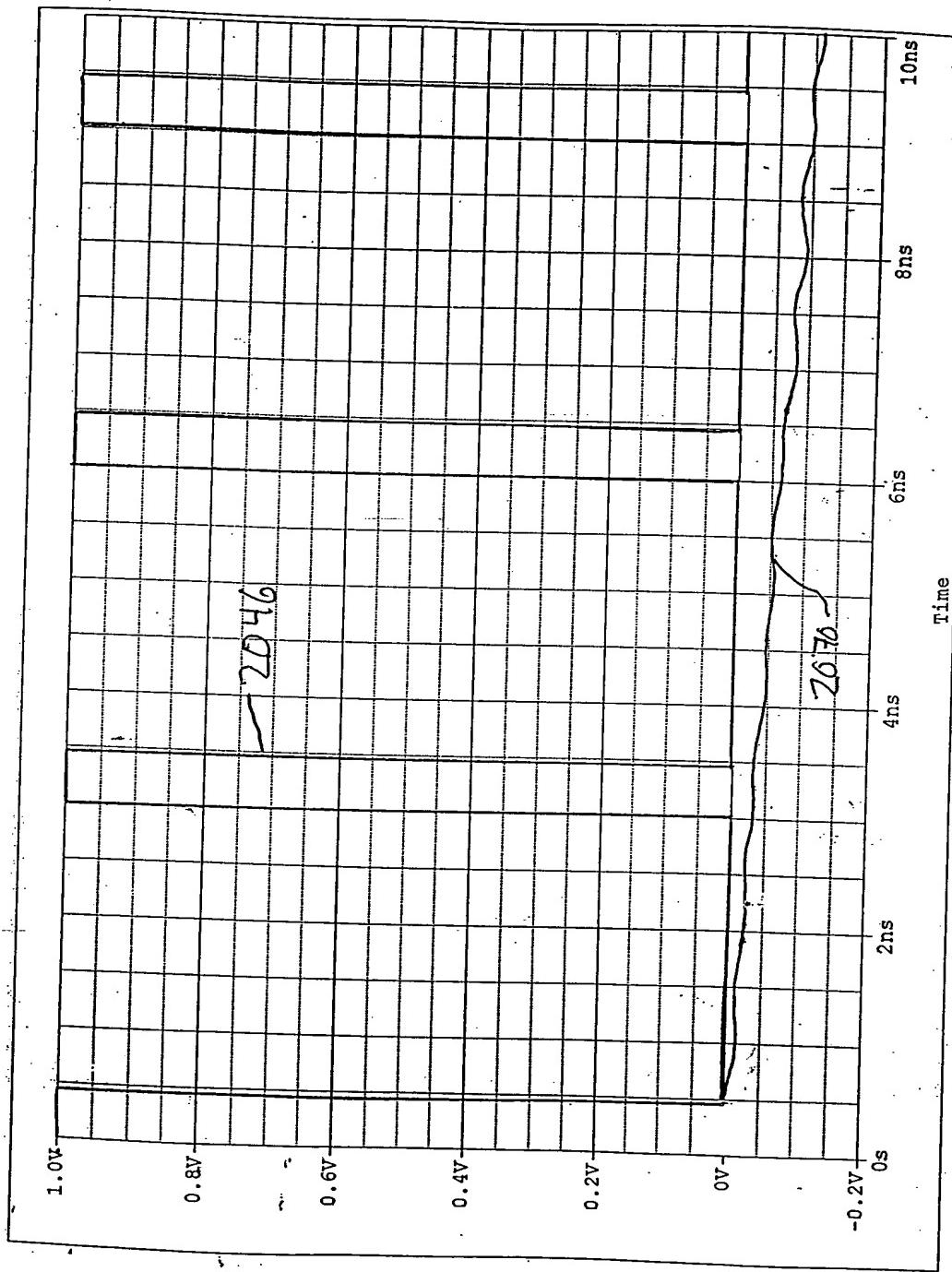


FIG. 20B

0 9 8 5 5 8 5 4 0 5 4 6 0 3



F16. 20C

T0350-T5555555

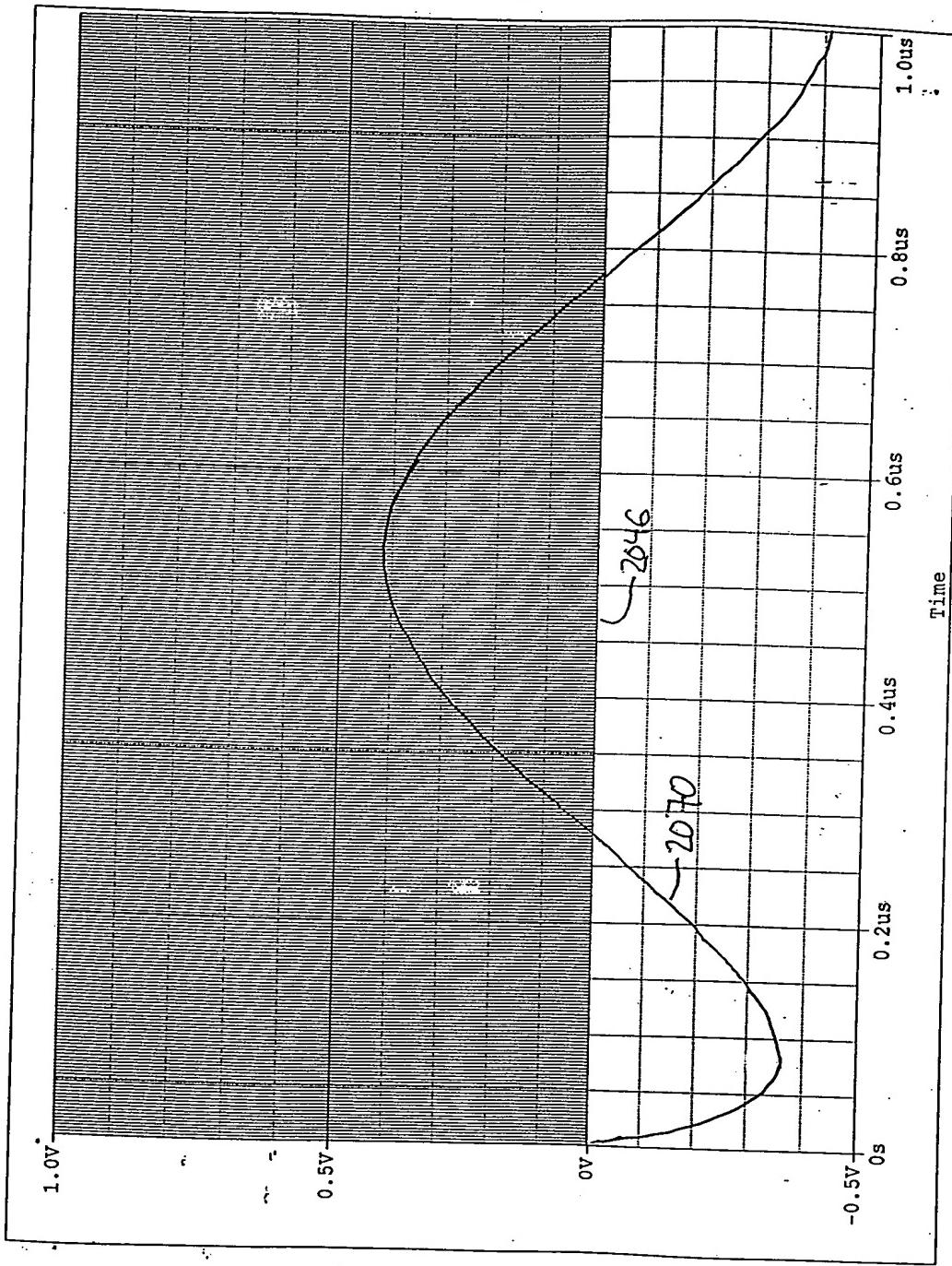


FIG. 20D

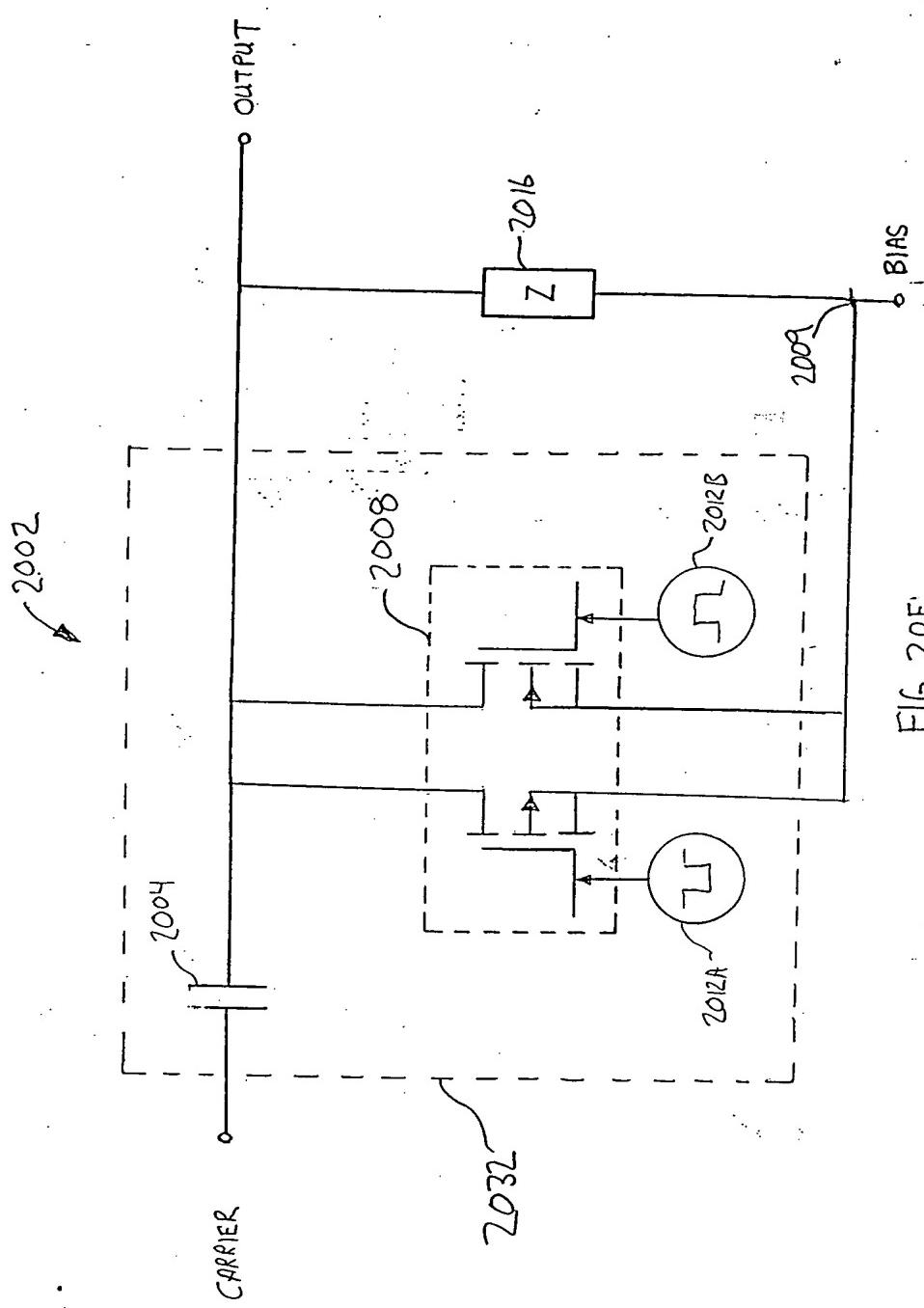


Fig. 20E

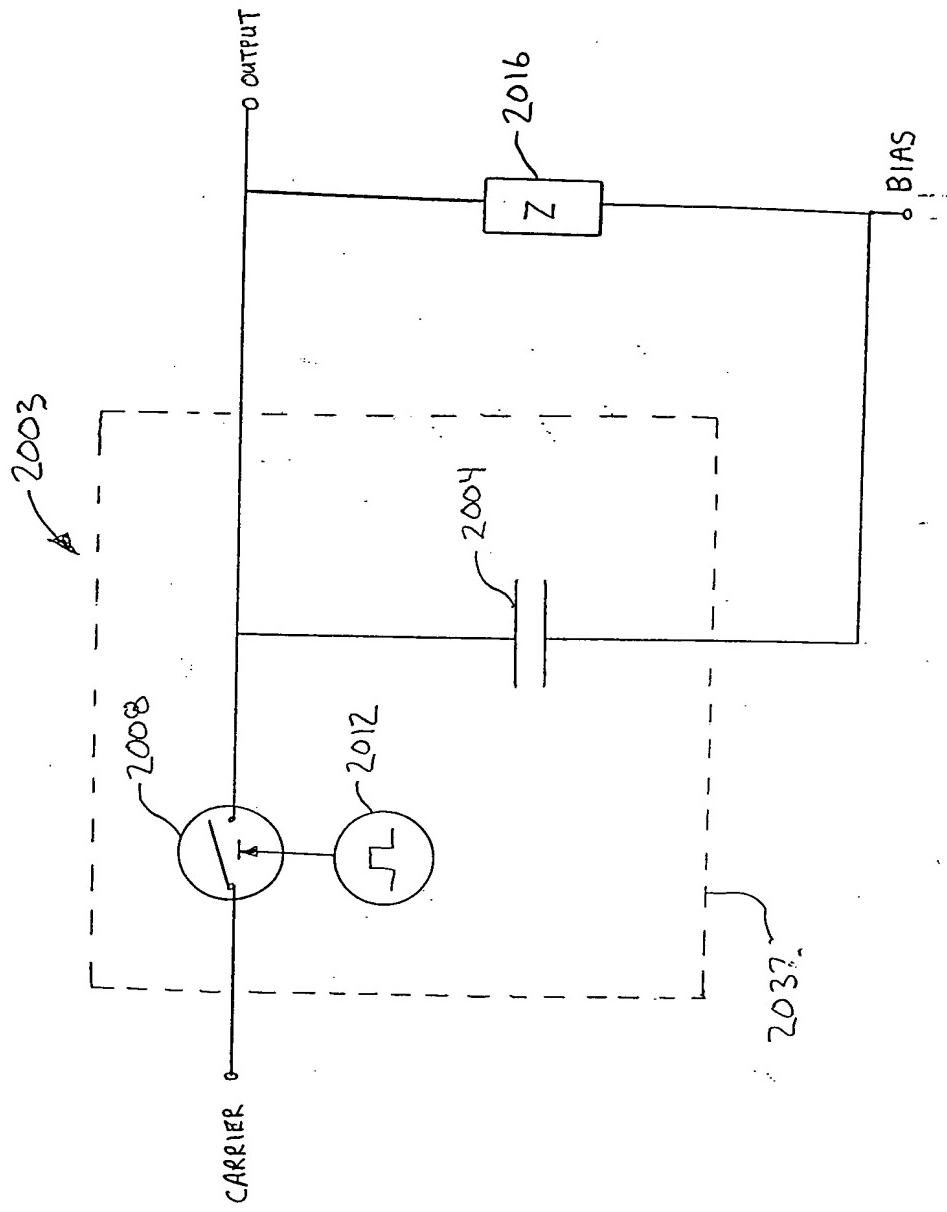


FIG. 20F

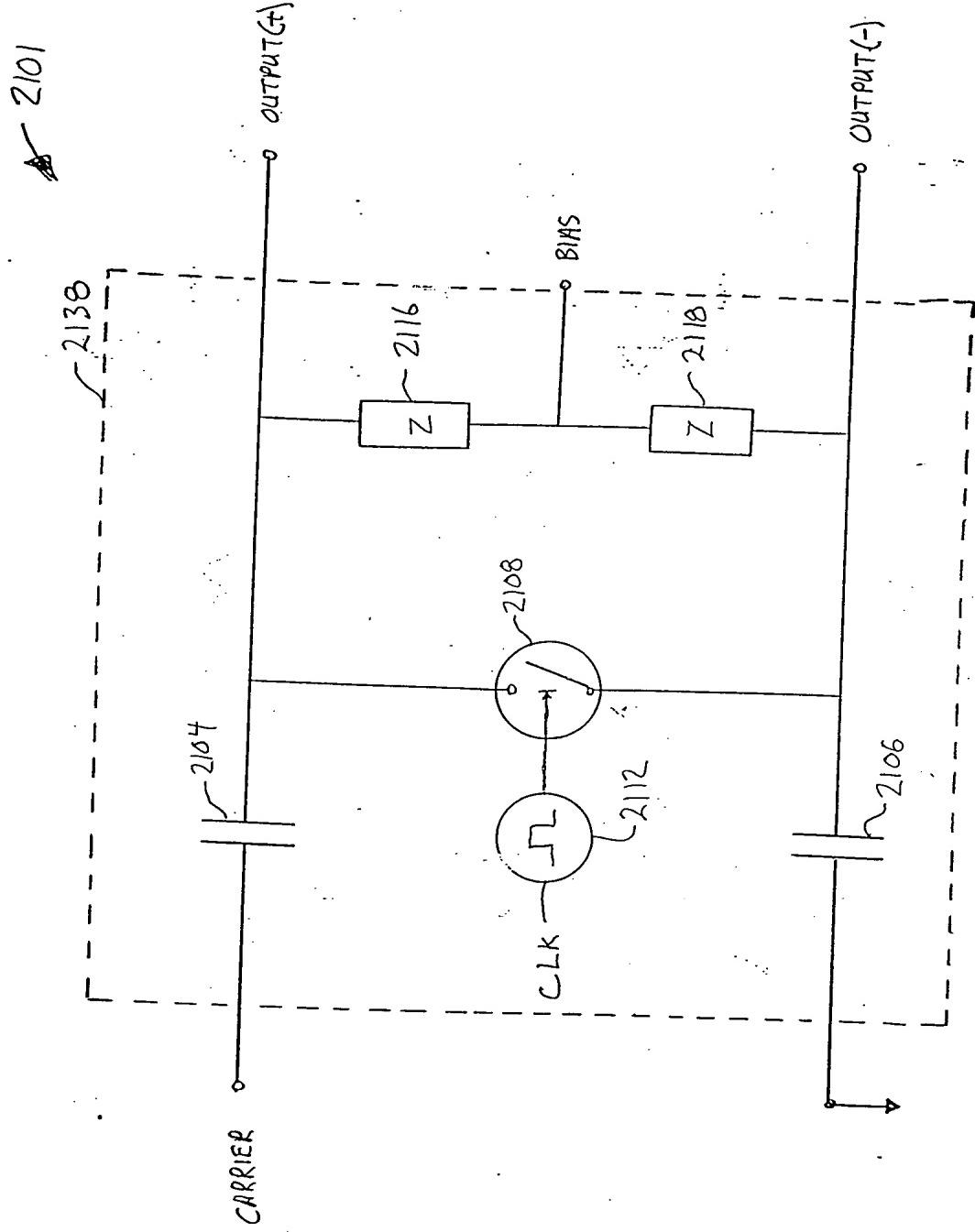


FIG. 21

FIG. 22

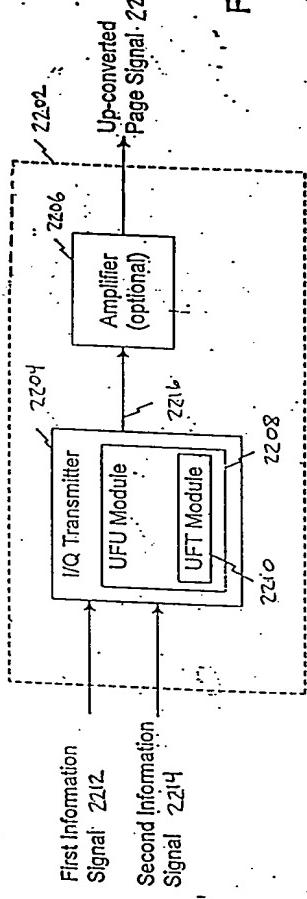
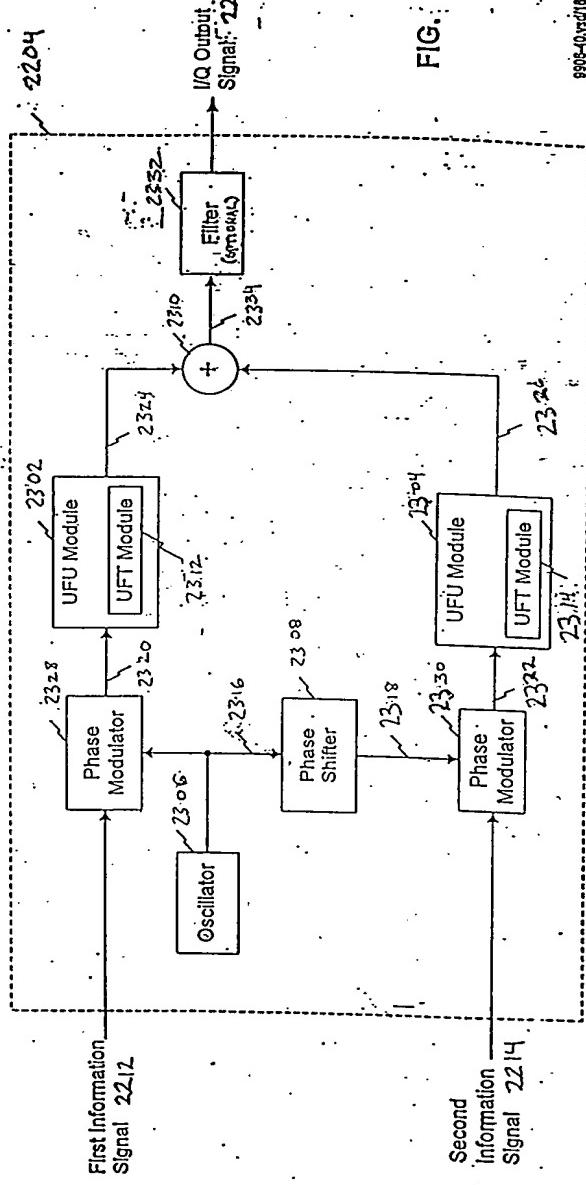
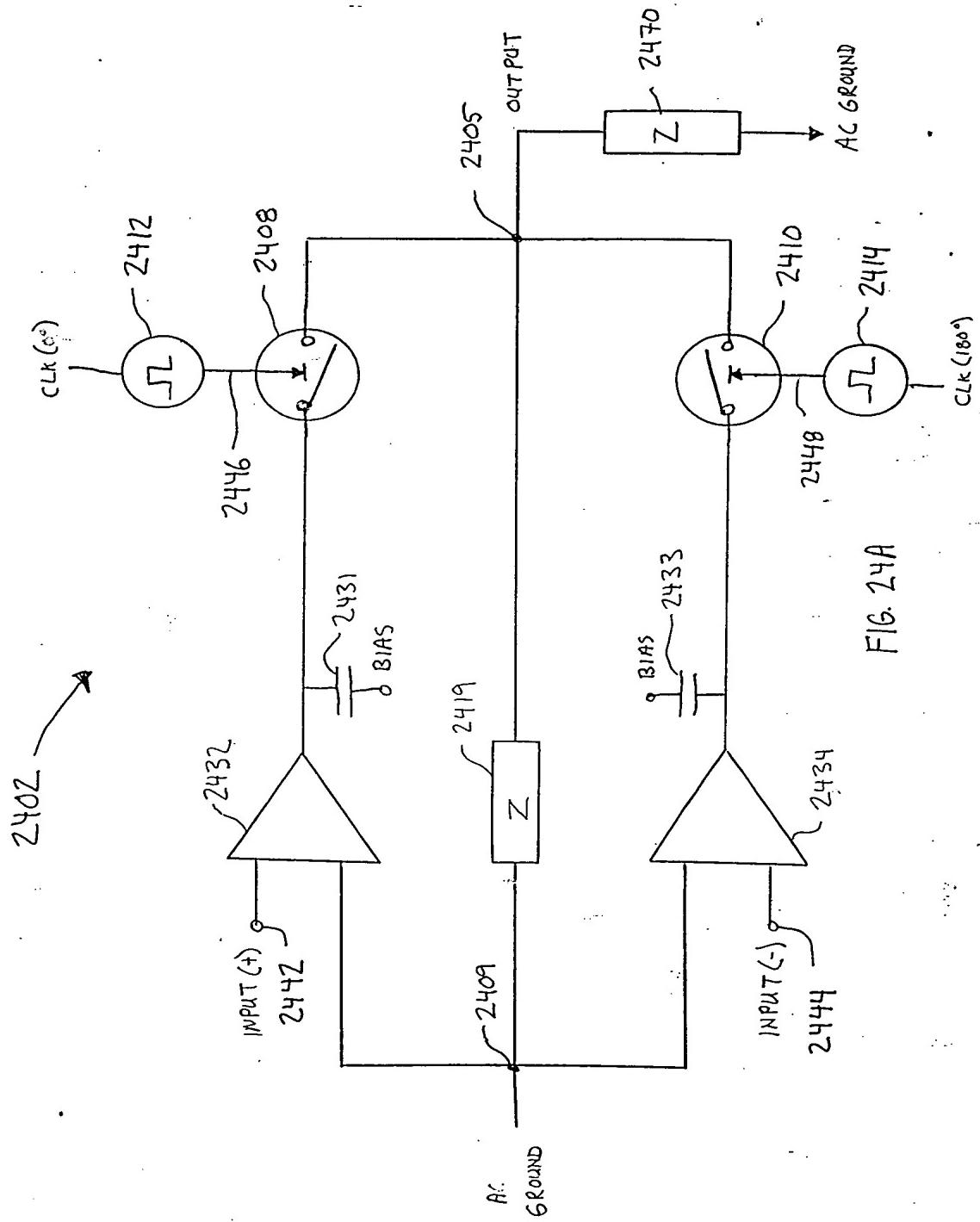


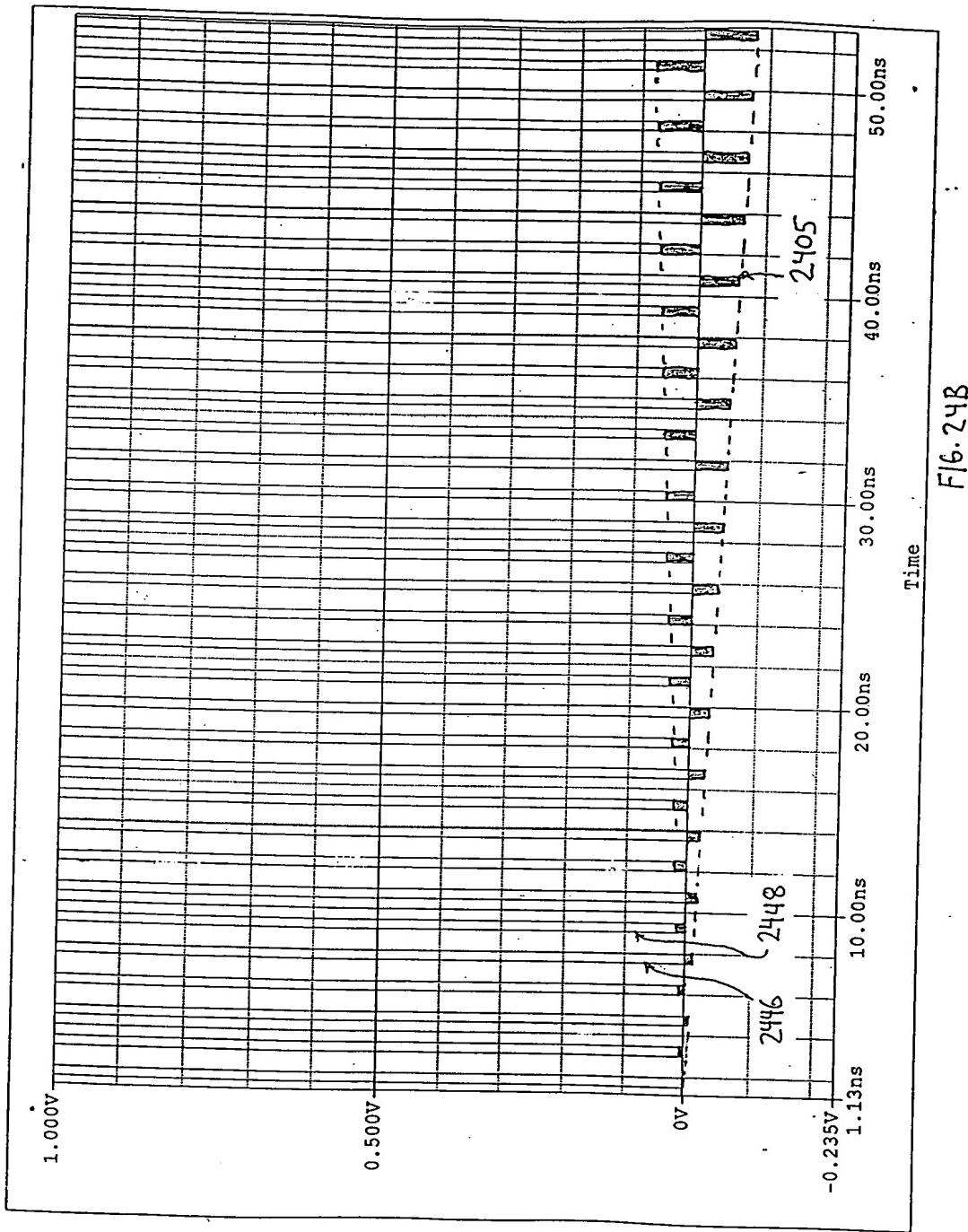
FIG. 23



9905-0000000



1995 1996 1997 1998 1999



F16.24B

F09T50 "Tage 860

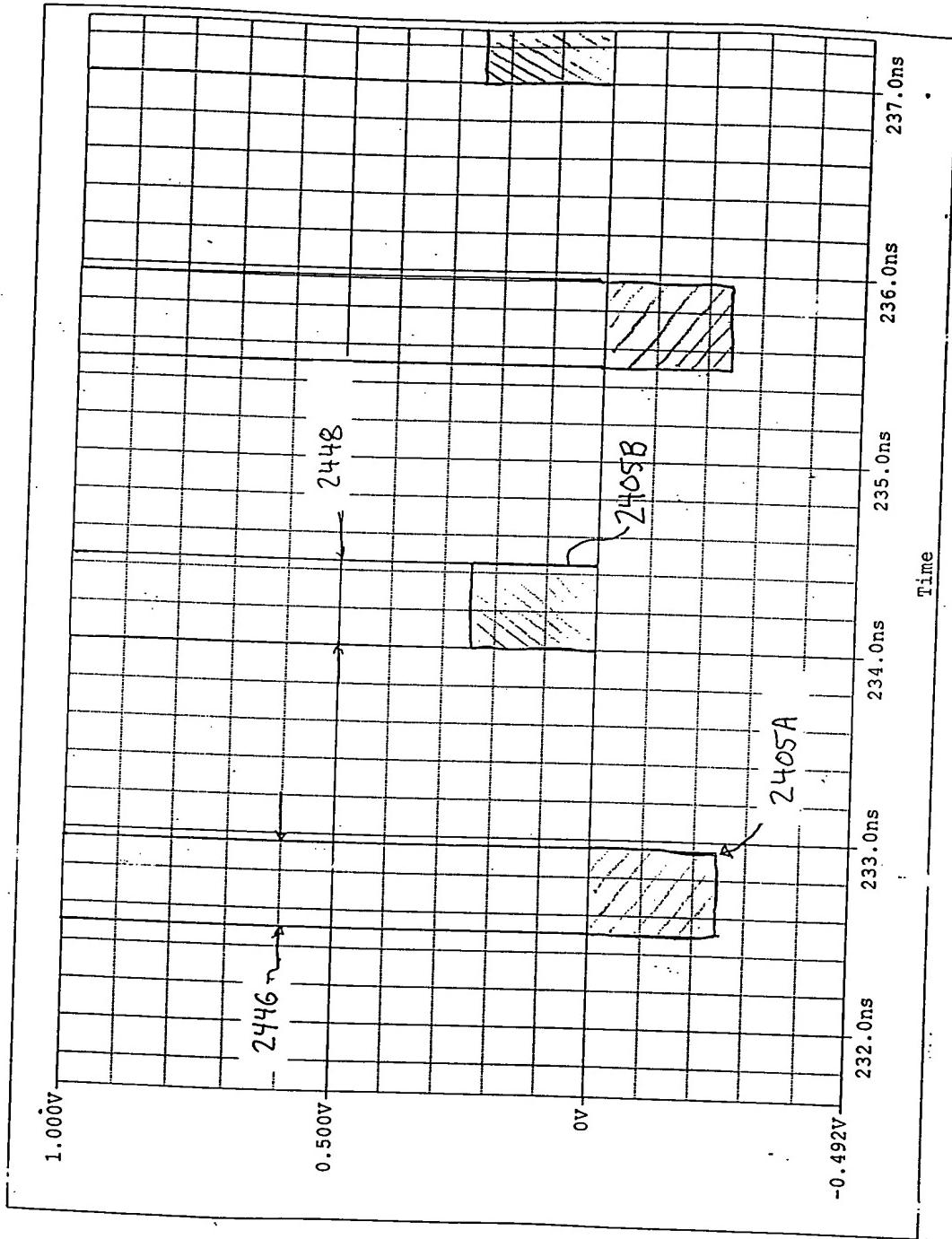


FIG. 24C

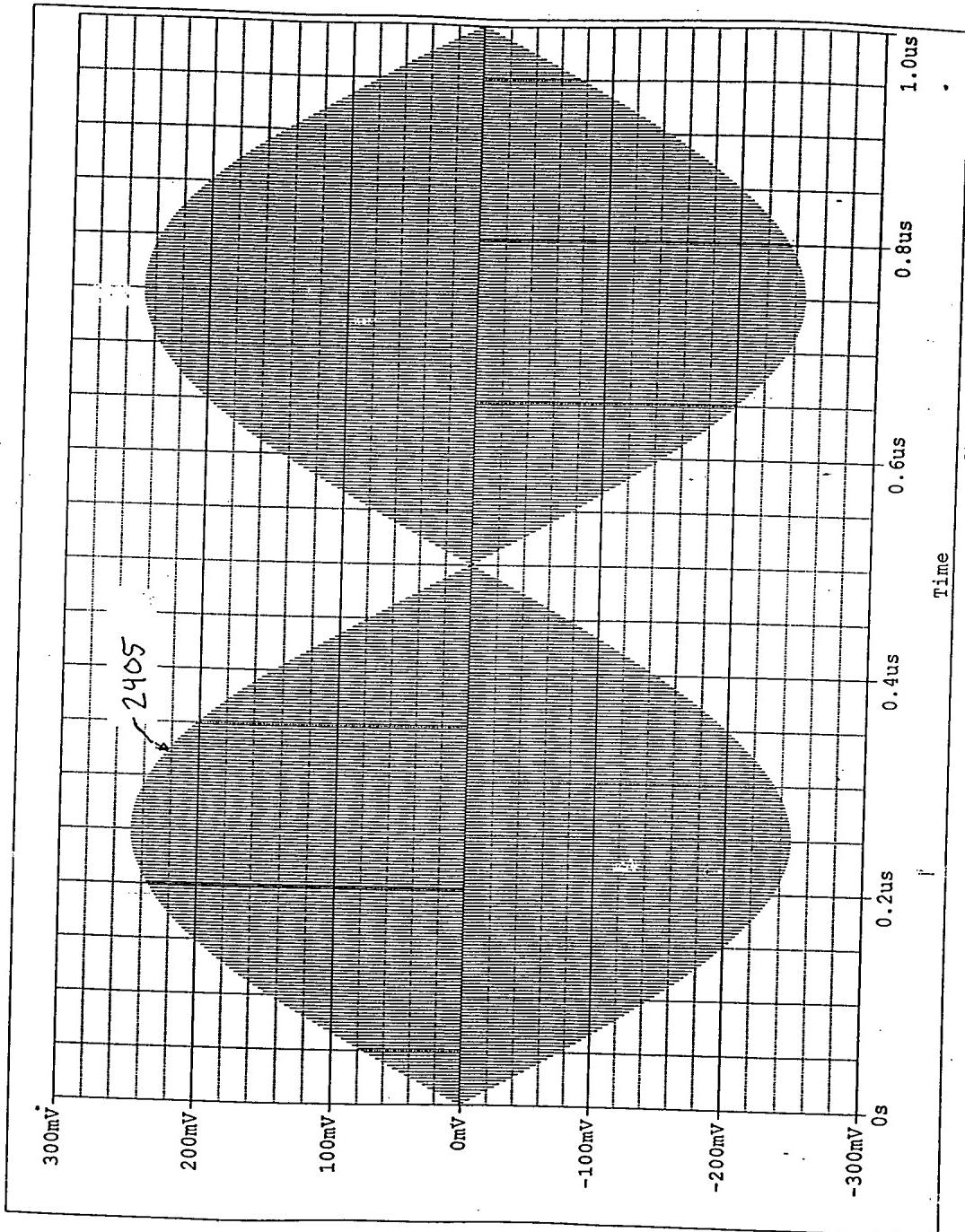


FIG. 24D

0606060606060606060

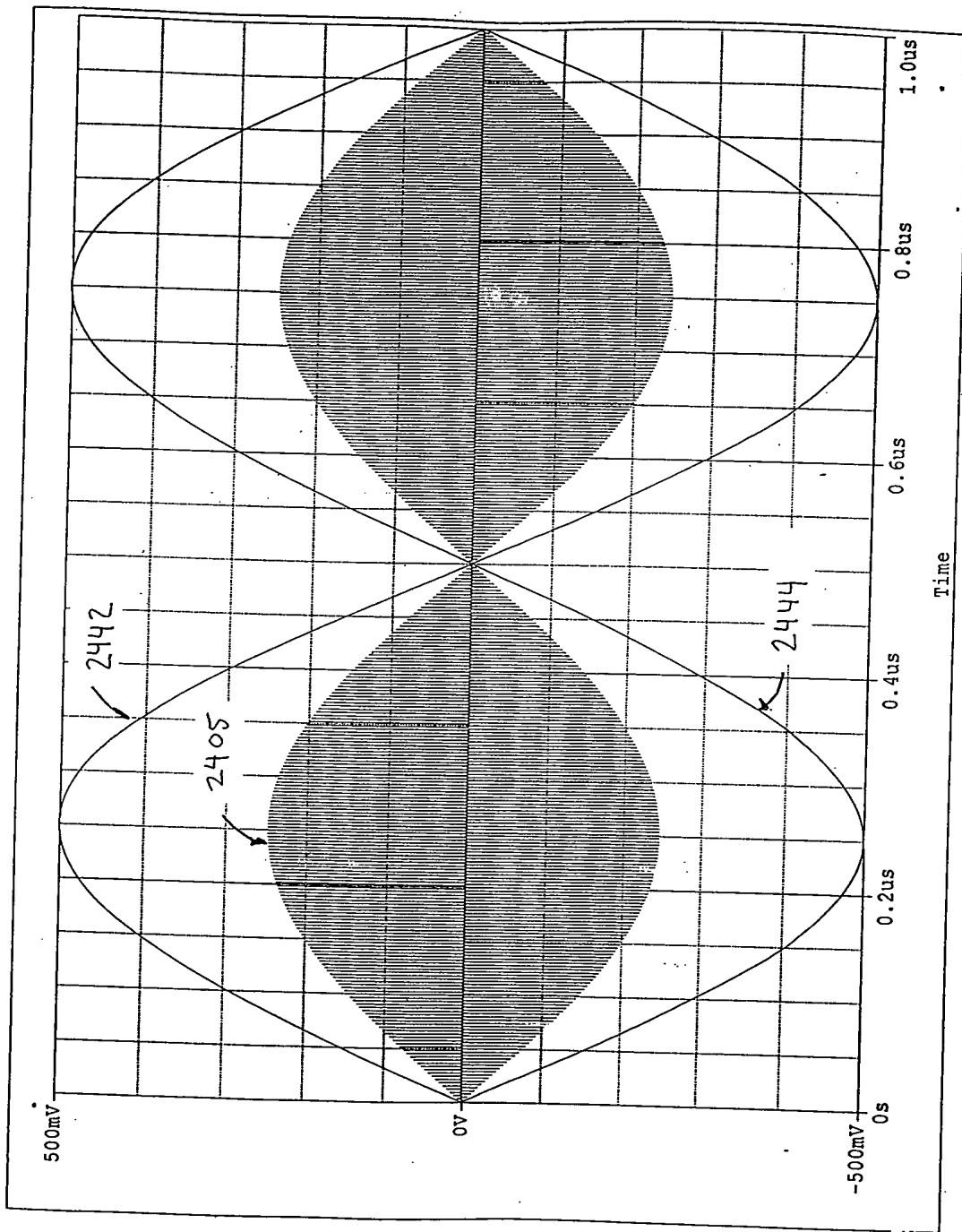


FIG. 24E

09855894 05460

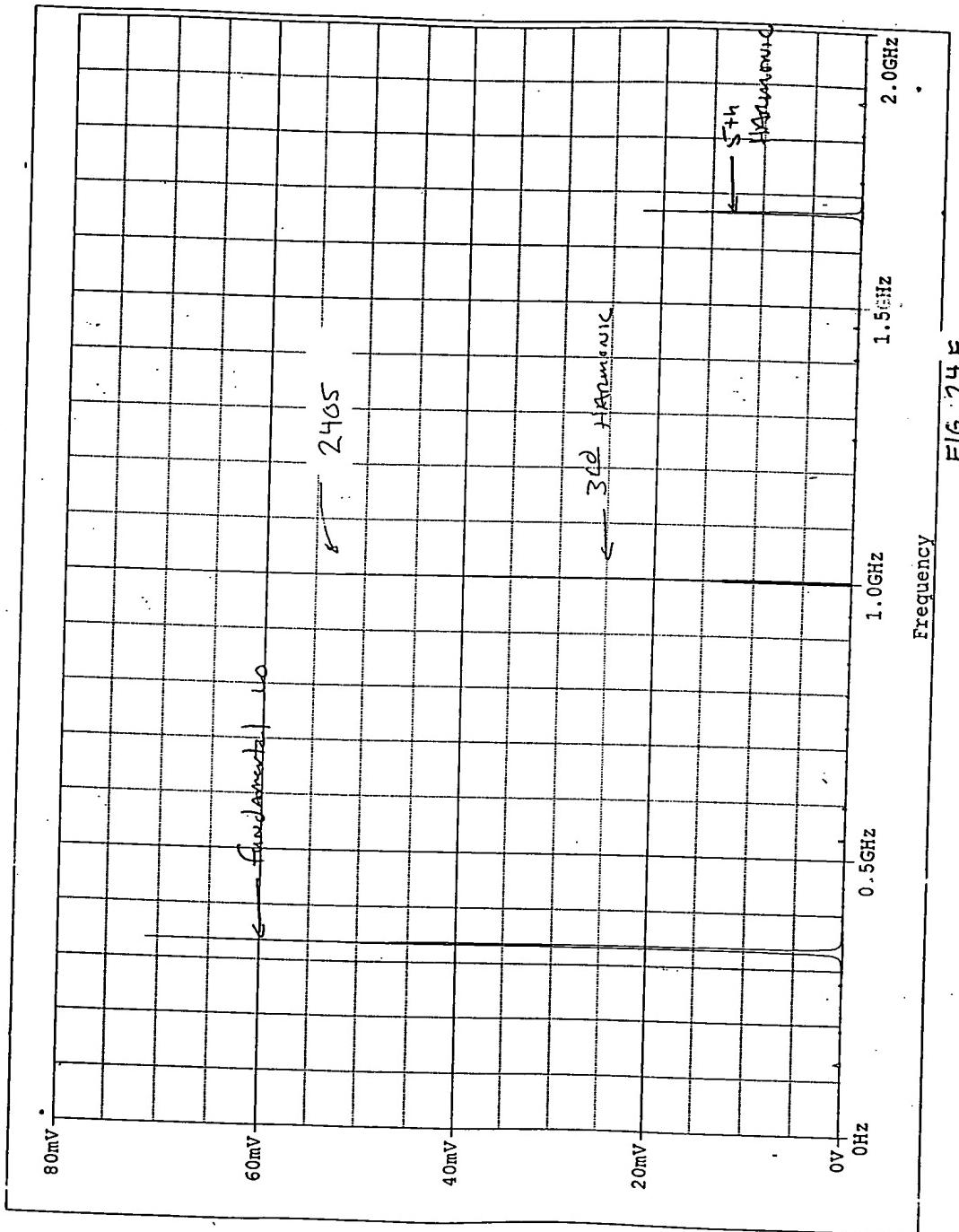


FIG. 24 F

0996556040 0996556040

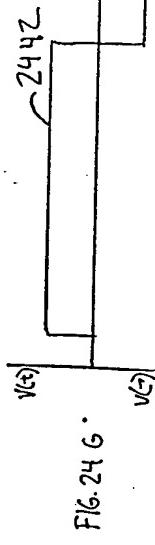


Fig. 24 G

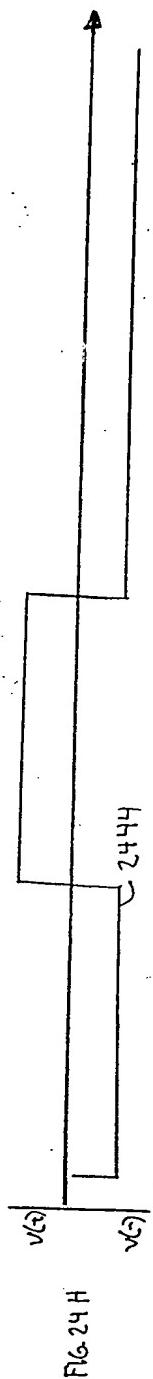


Fig. 24 H

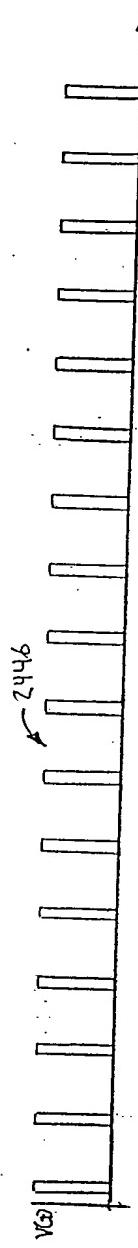


Fig. 24 I

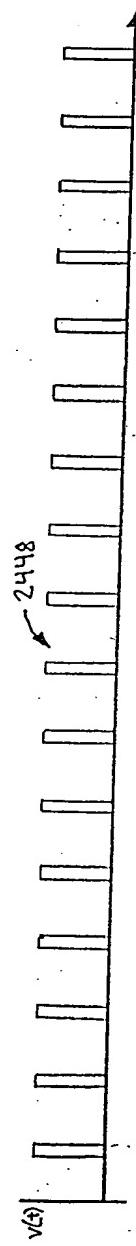


Fig. 24 J

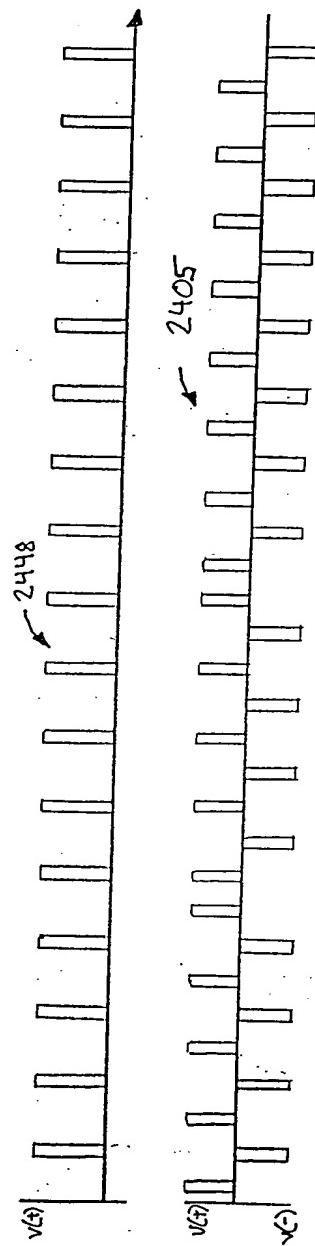


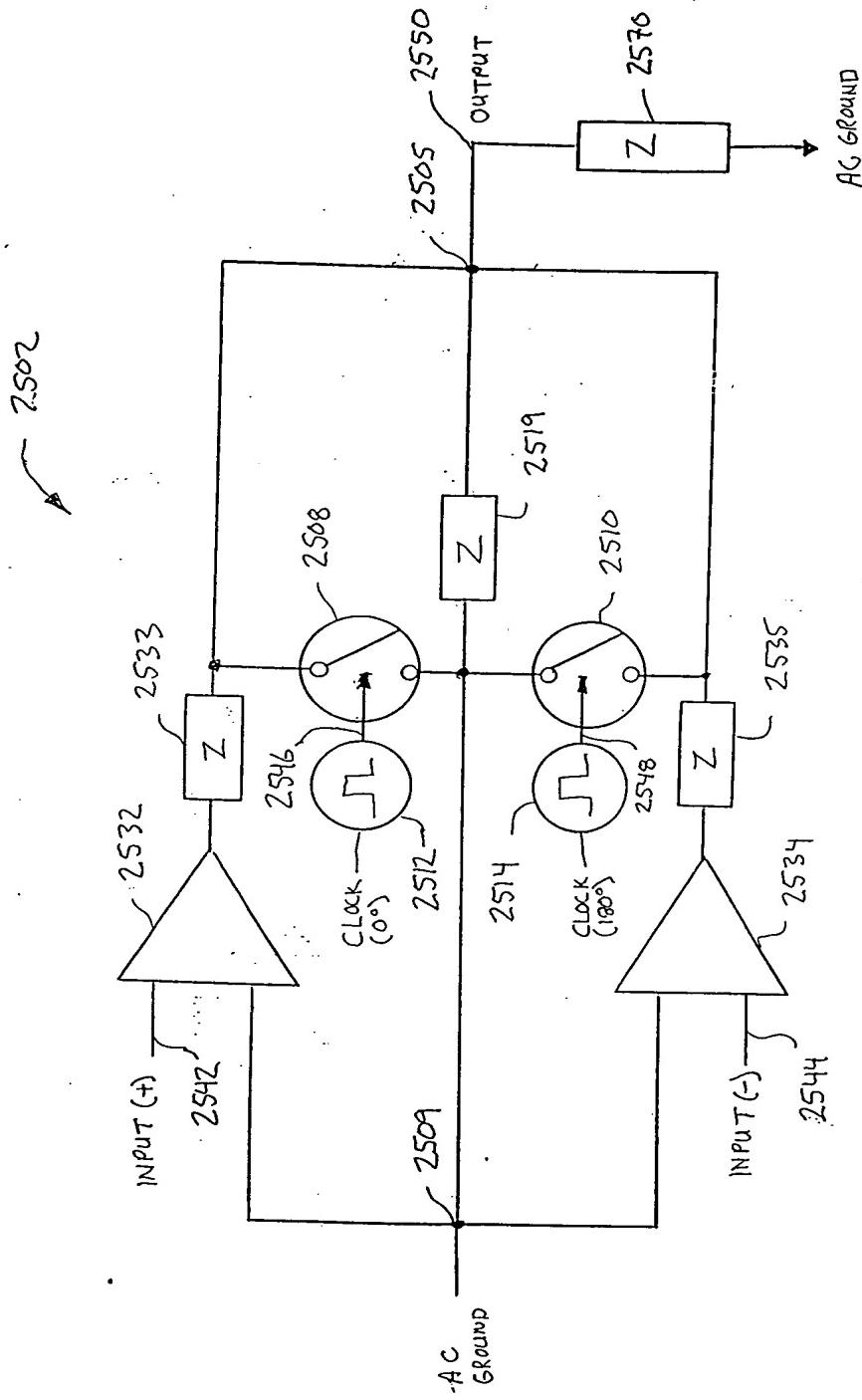
Fig. 24 K

2445

2446

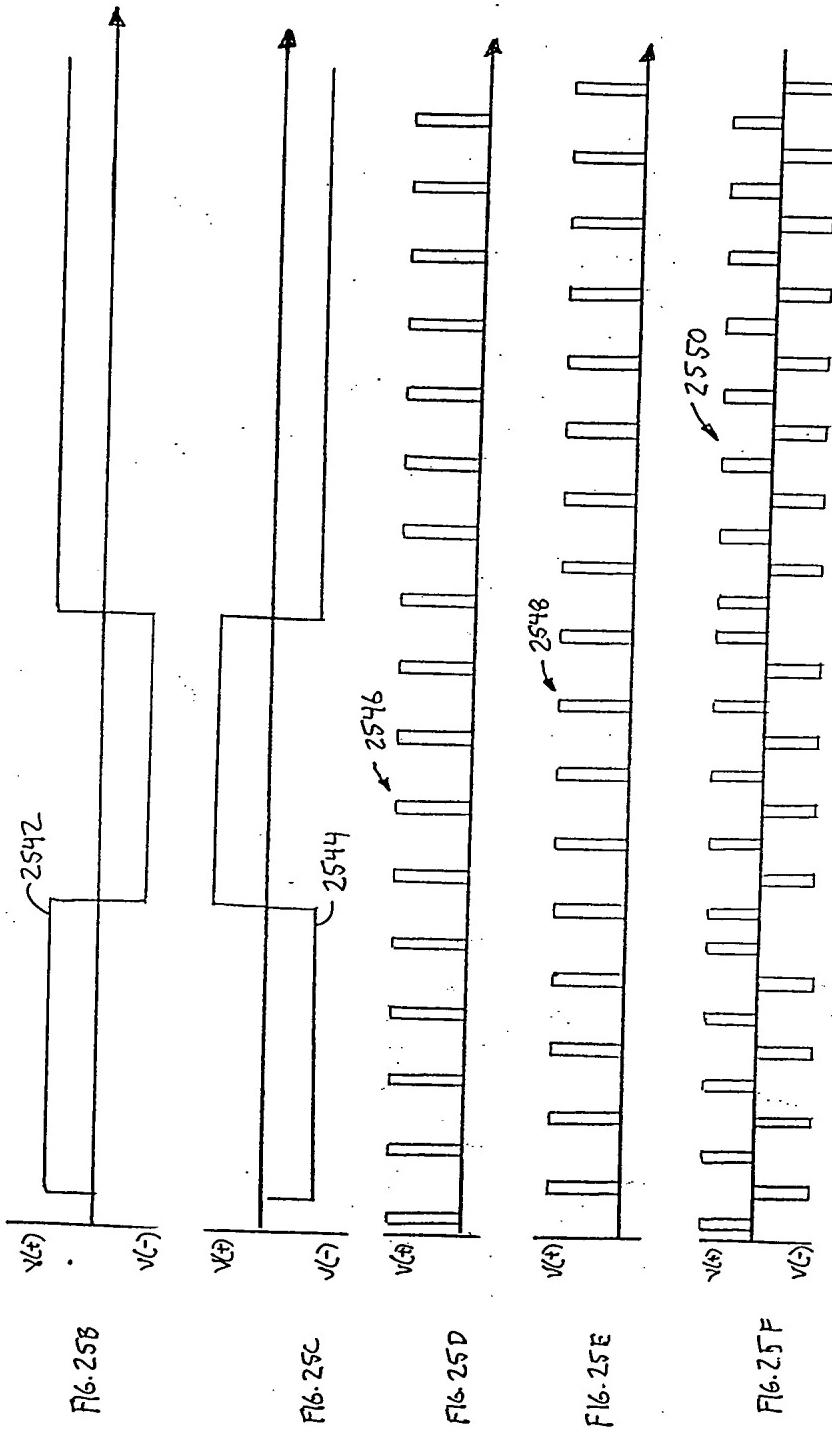
2448

F16. 25A

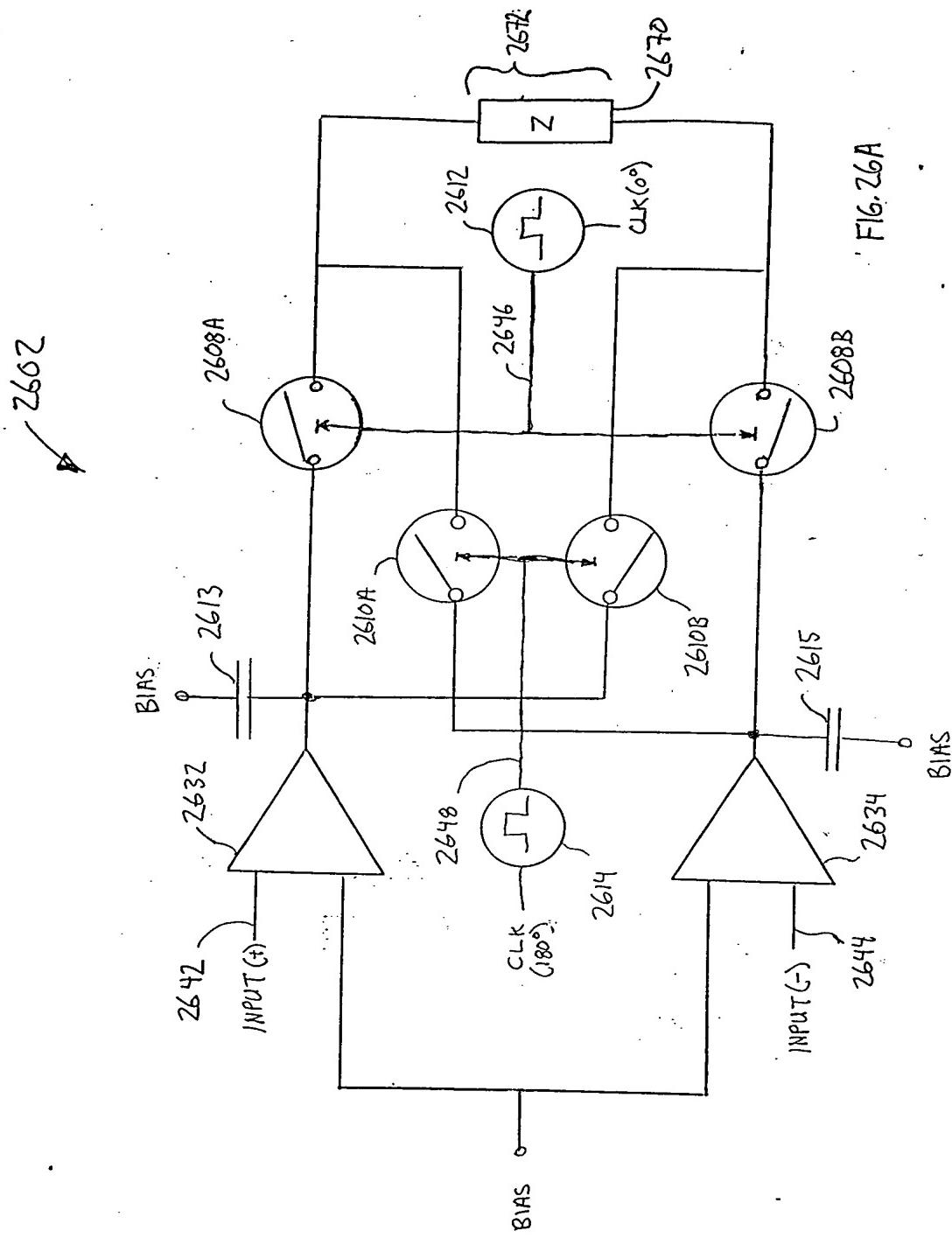


F16. 25A

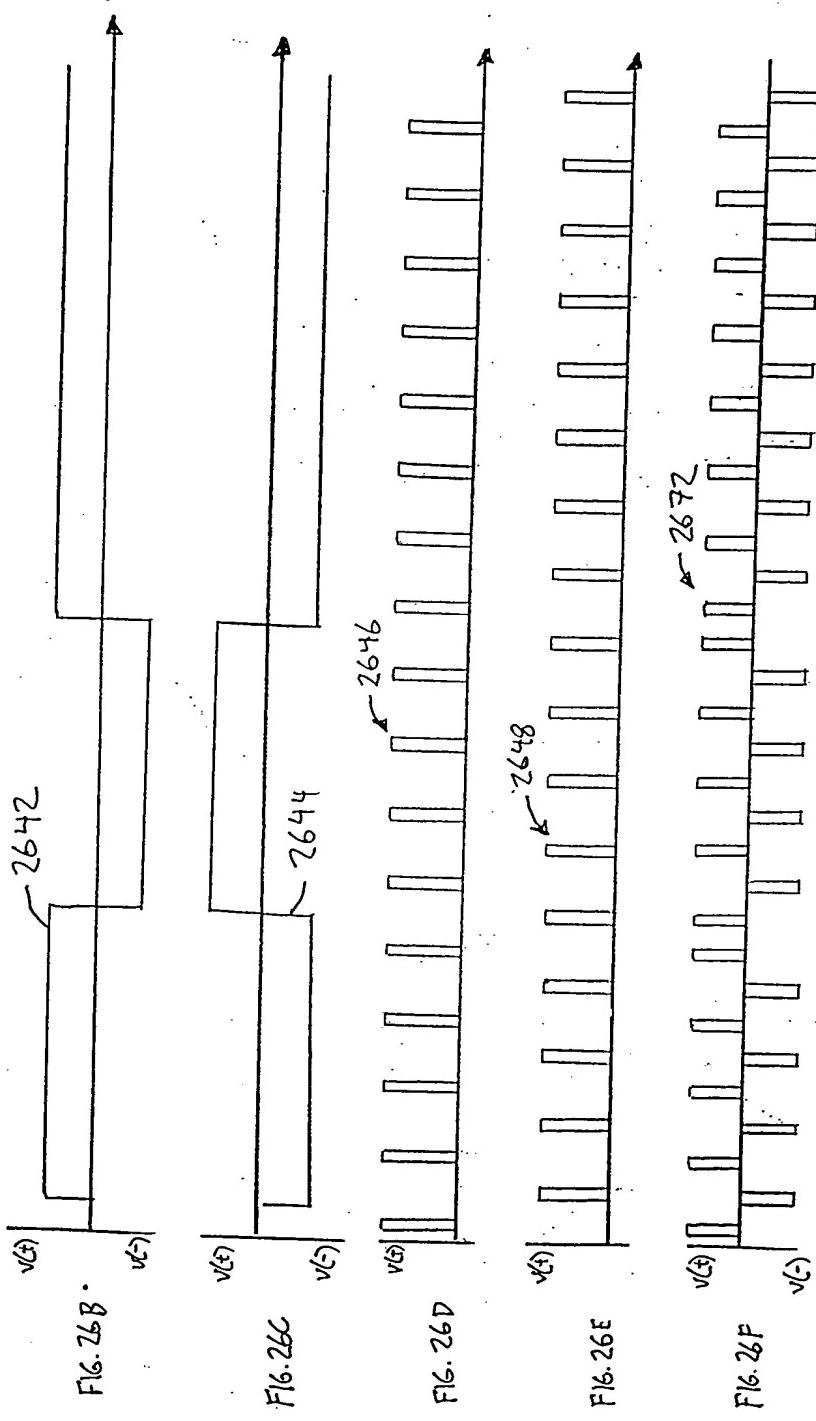
0 9 8 7 6 5 4 3 2 1 0 9 8 7 6 5 4 3



卷之三

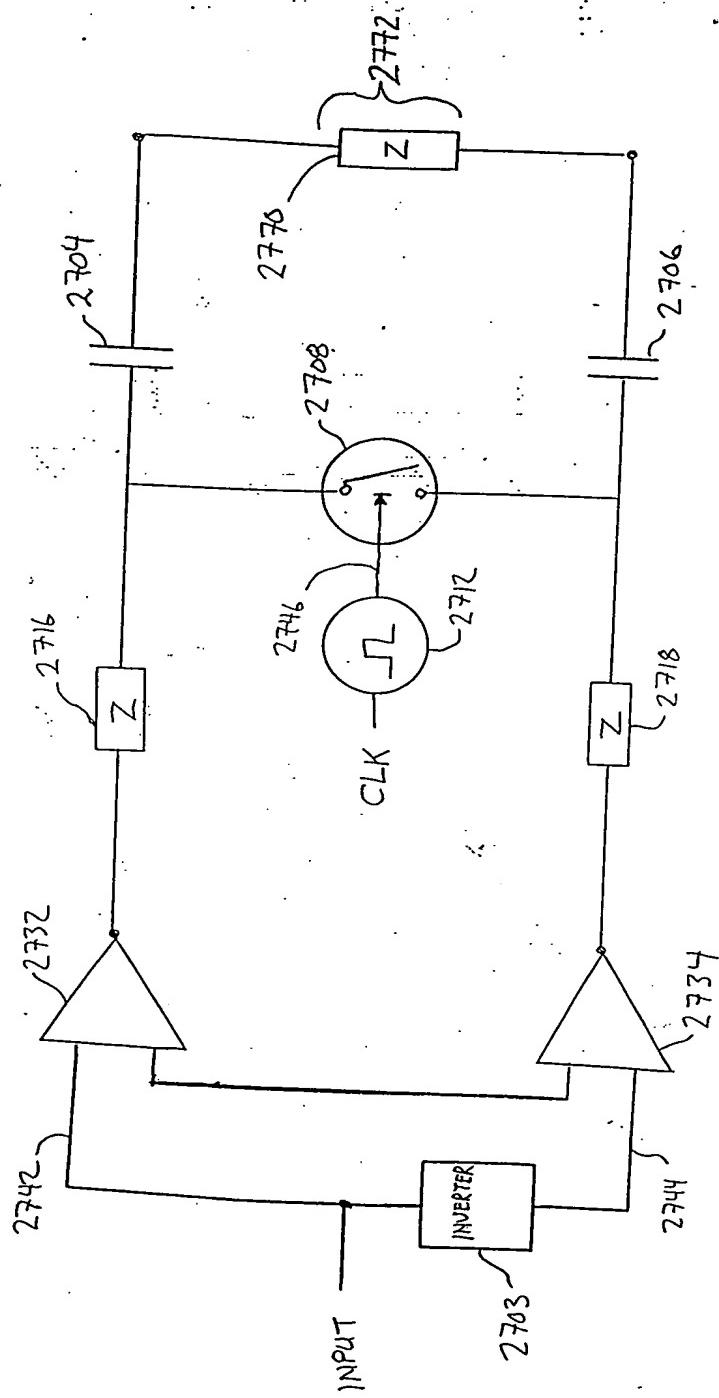


0965569400 1610



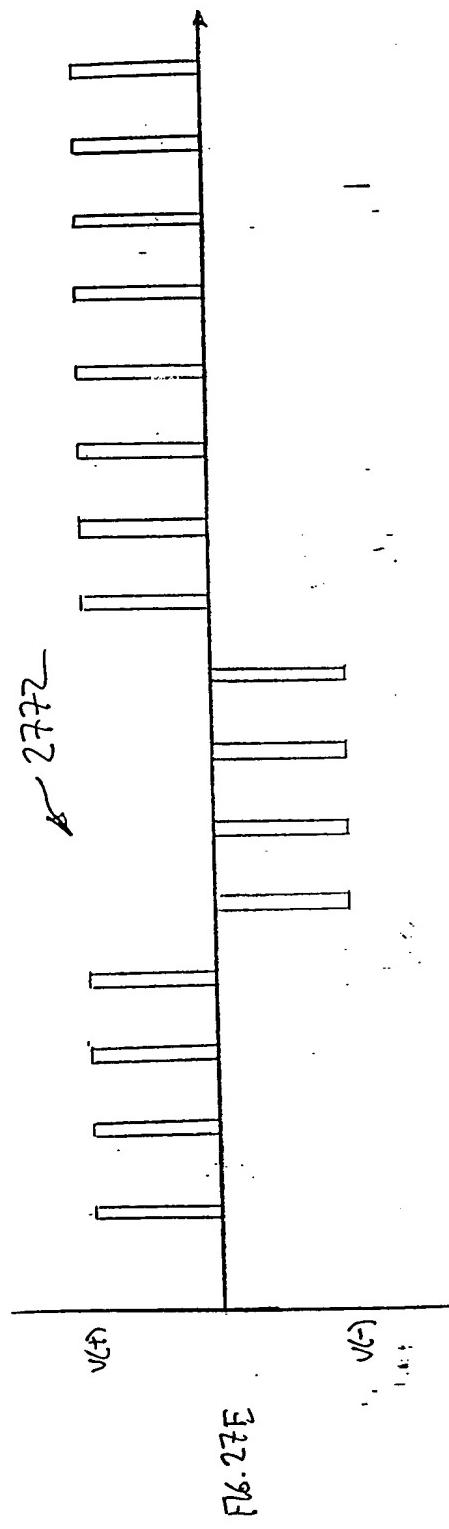
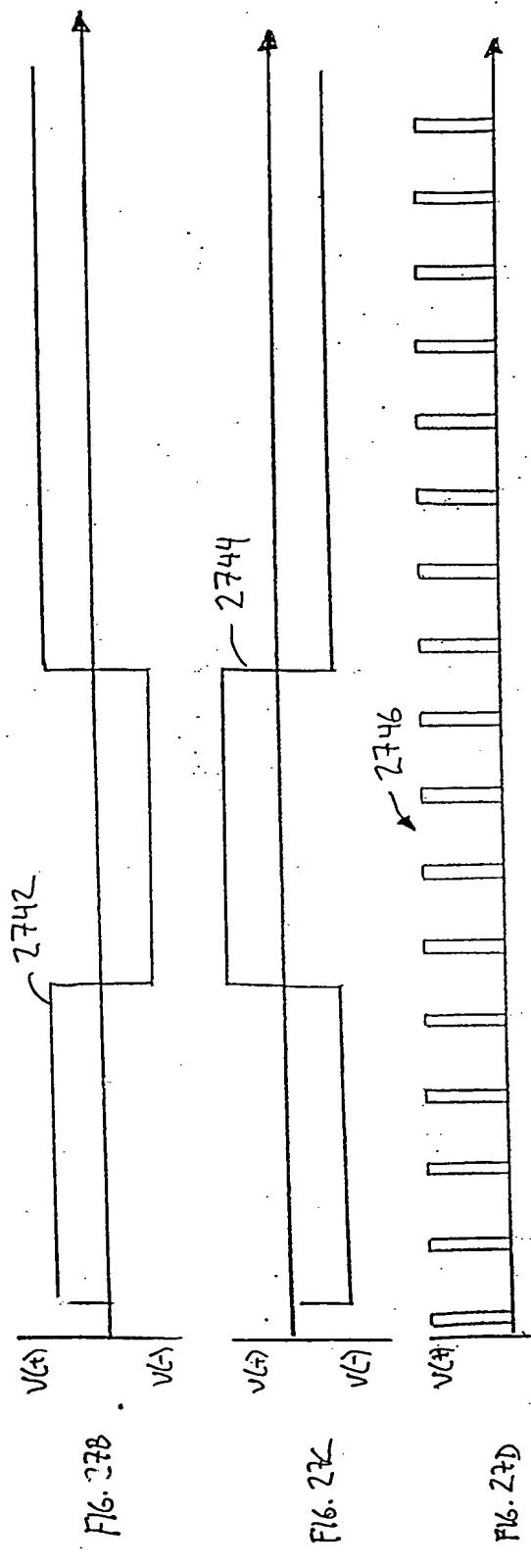
09855854. 05.6.00

2702



F16. 27A

05355854 054604



09833341 054600

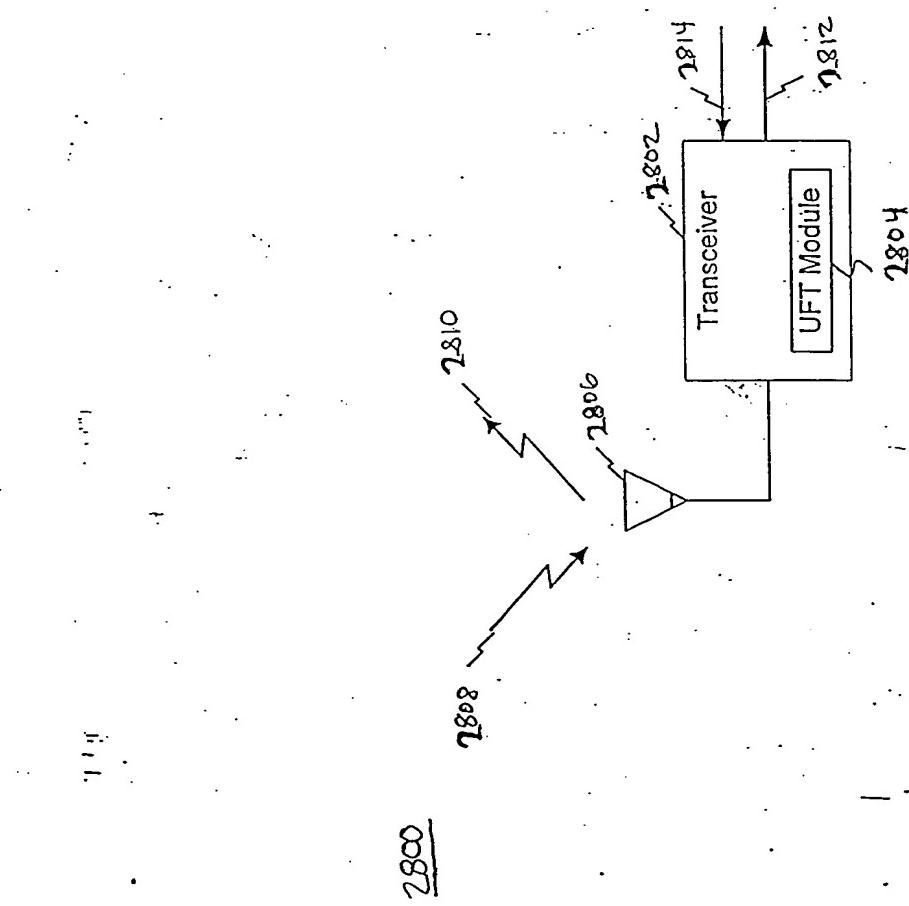


FIG. 28

FIG. 29

EXEMPLARY RECEIVER FOR
UNIVERSAL FREQUENCY DOWN-CONVERSION

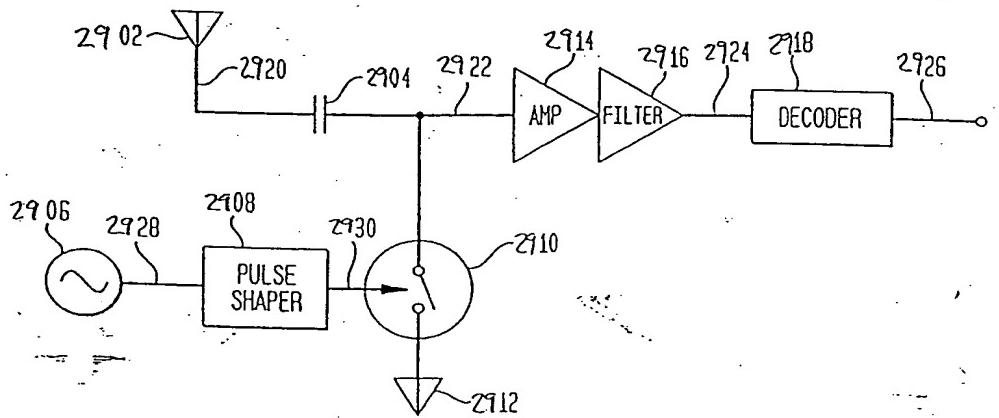
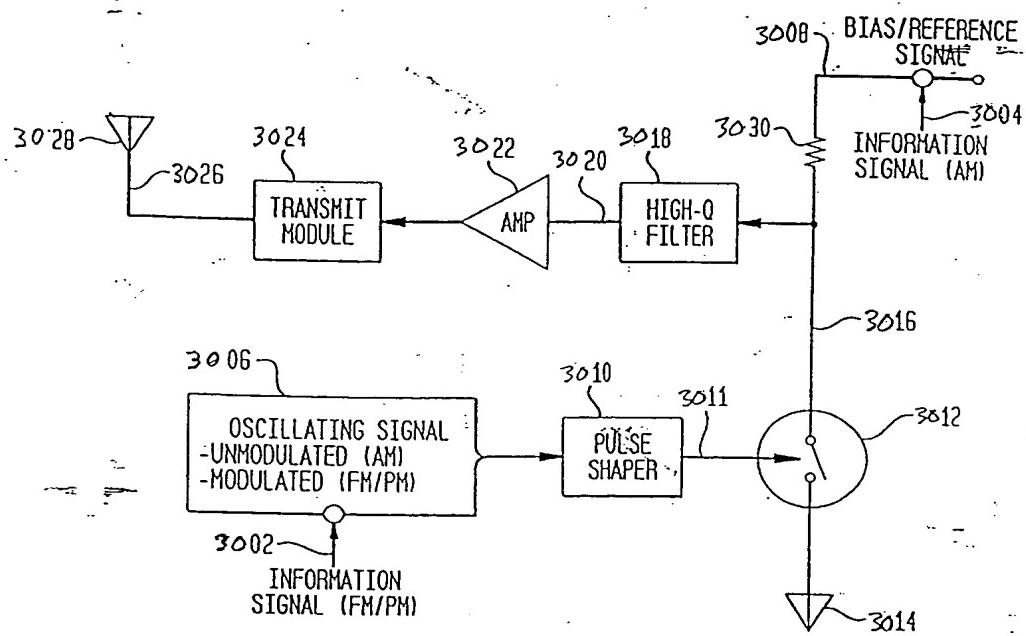


FIG. 30

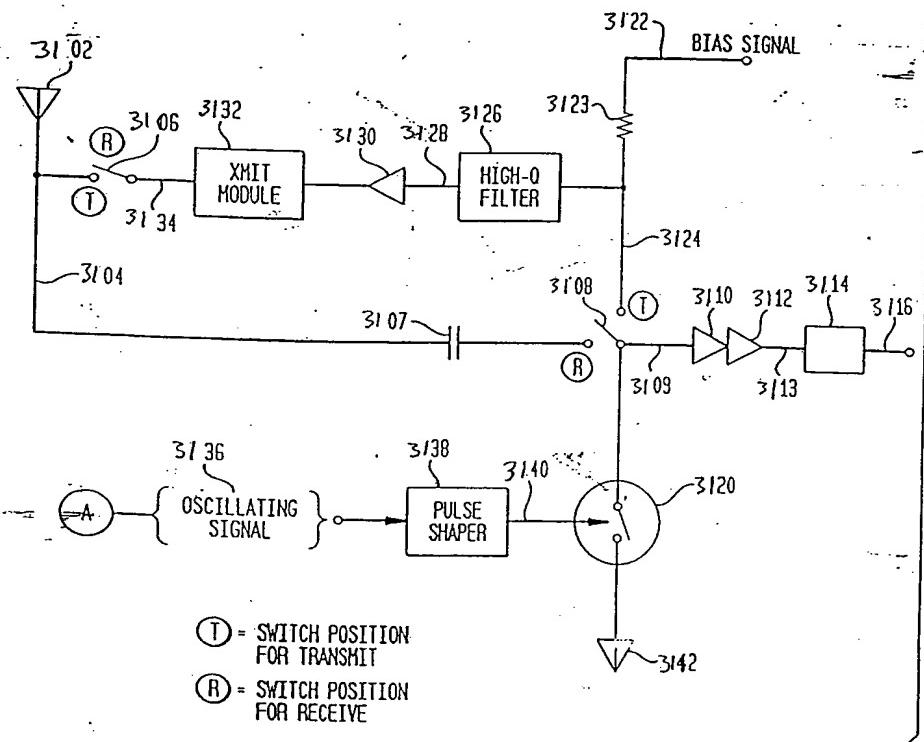
EXEMPLARY TRANSMITTER USING
THE PRESENT INVENTION



0 9855854 05460

FIG. 31A

TRANSMITTER USING PRESENT INVENTION IN A
HALF DUPLEX COMMUNICATIONS CIRCUIT WITH A
UNIVERSAL FREQUENCY DOWN-CONVERTER (FM & PM)



09855654 654663

FIG. 31B

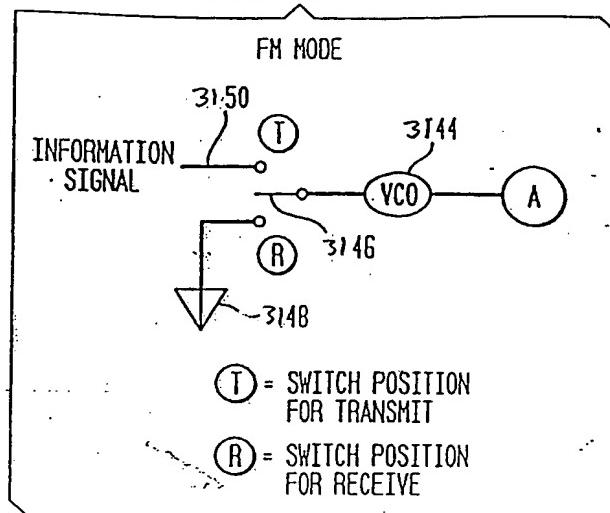
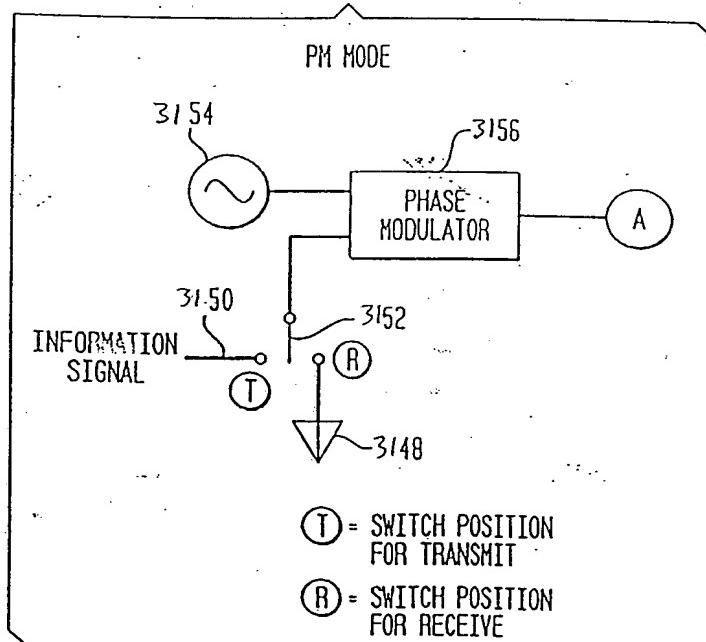


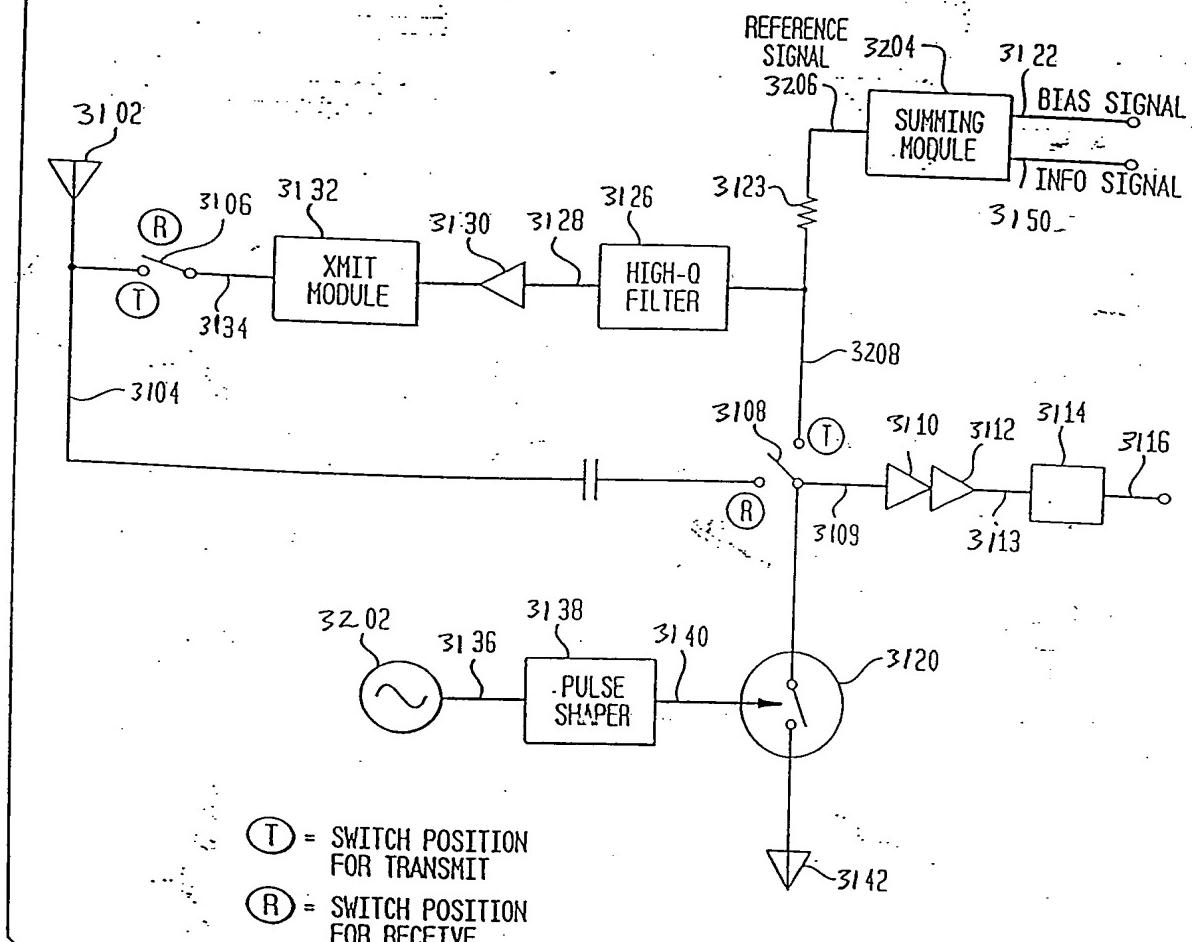
FIG. 31C



09655604 0964604

FIG. 32

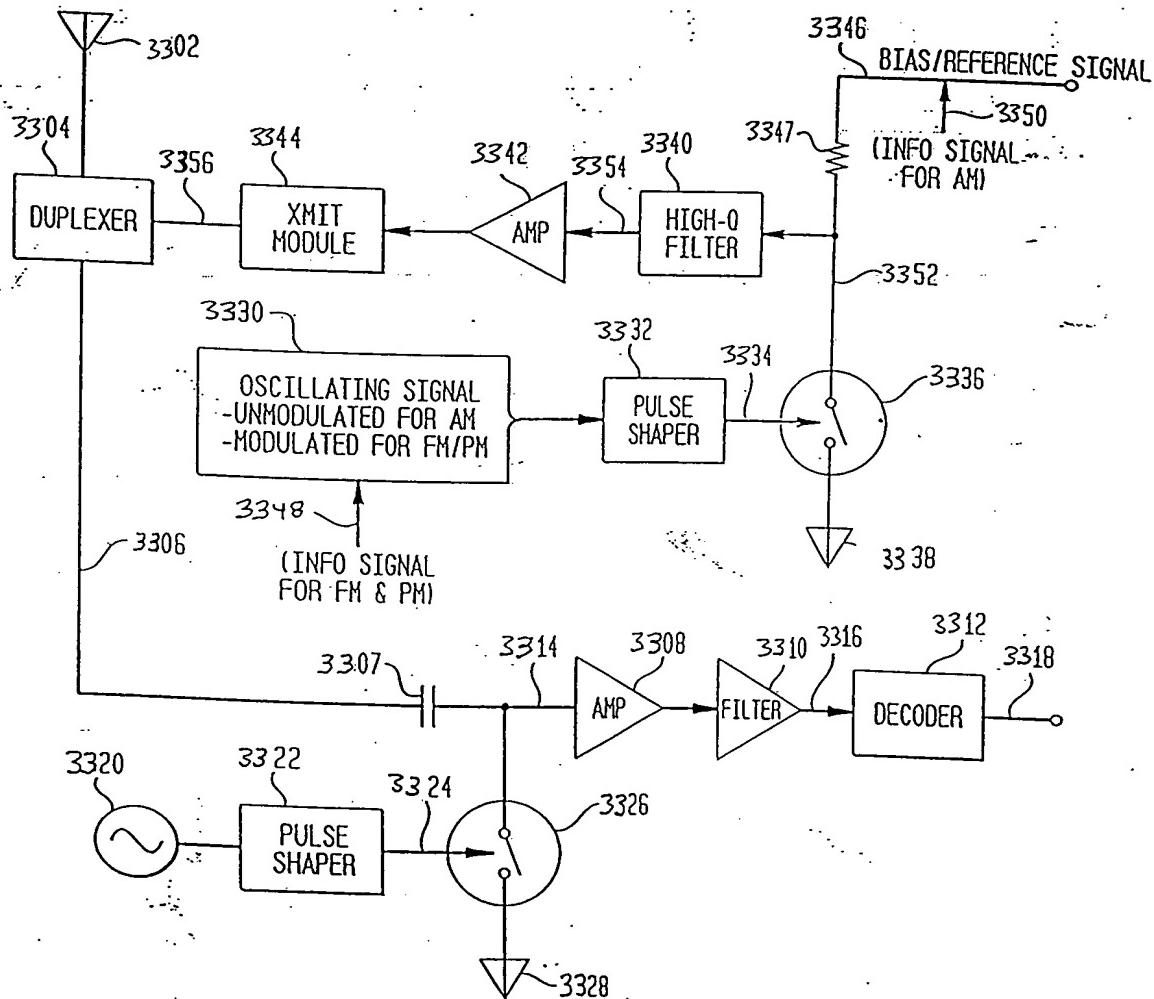
TRANSMITTER USING PRESENT INVENTION IN
A HALF-DUPLEX COMMUNICATIONS CIRCUIT
WITH A UNIVERSAL FREQUENCY DOWN-CONVERTER(AM)



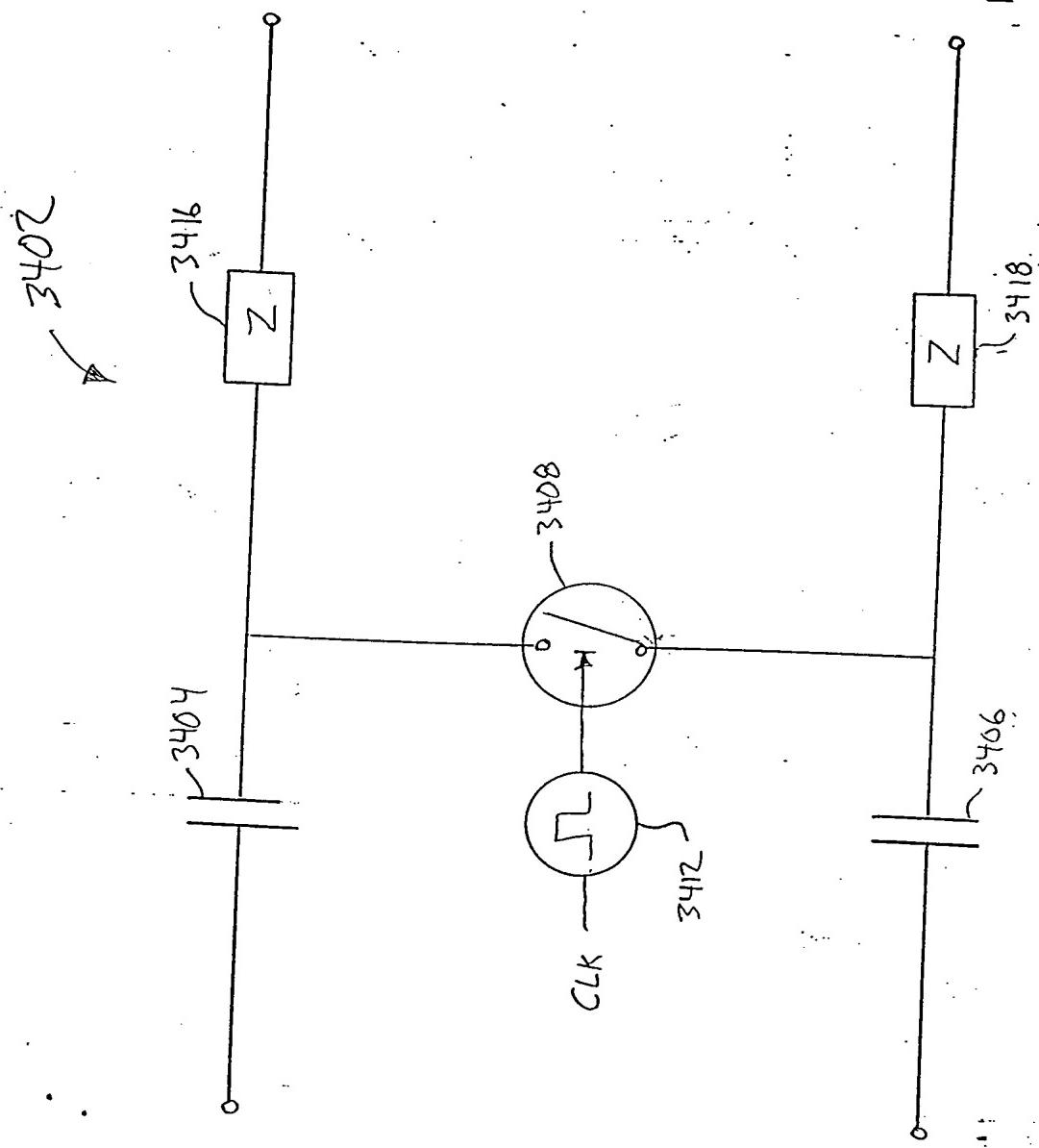
09855854 024684

FIG. 33

TRANSMITTER USING PRESENT INVENTION IN FULL DUPLEX COMMUNICATIONS CIRCUIT WITH UNIVERSAL FREQUENCY DOWN-CONVERTER

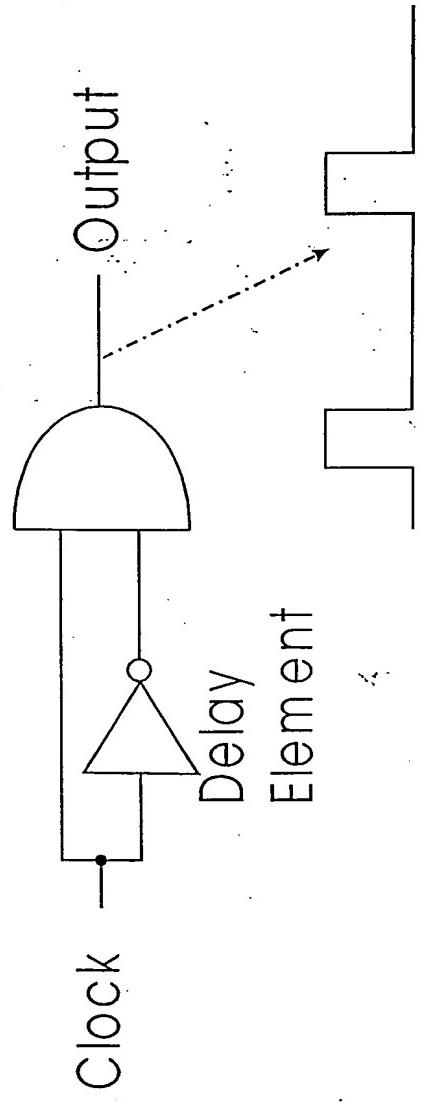


09935534 09935534



F16. 34

09355601 05160



F16. 35

0965533 021601

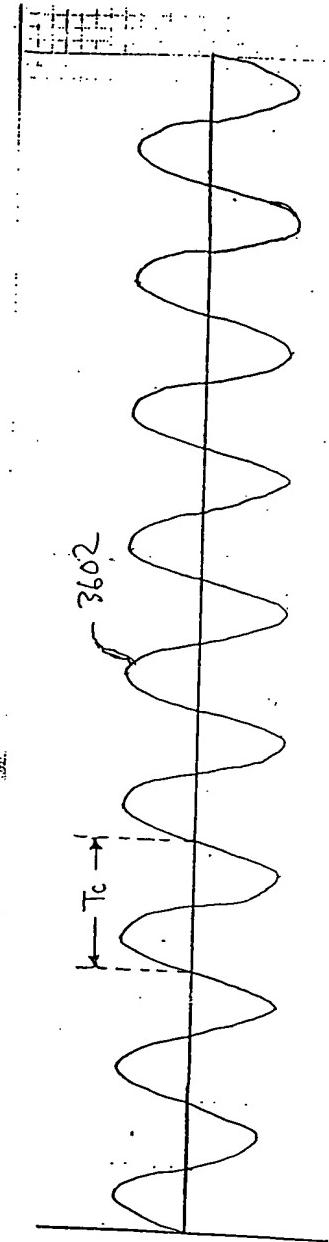


FIG. 36

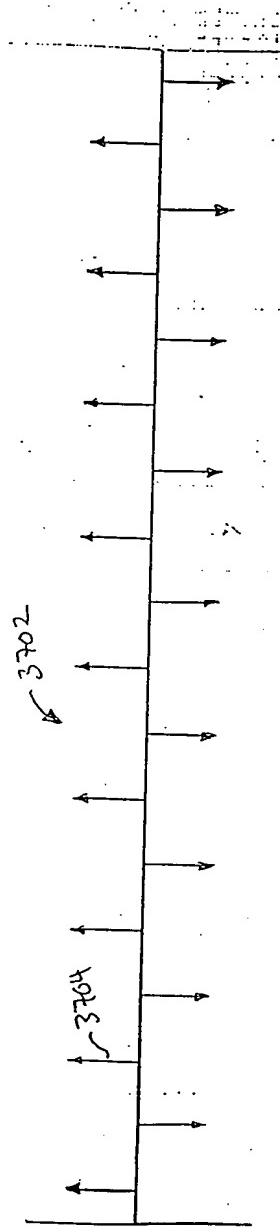


FIG. 37

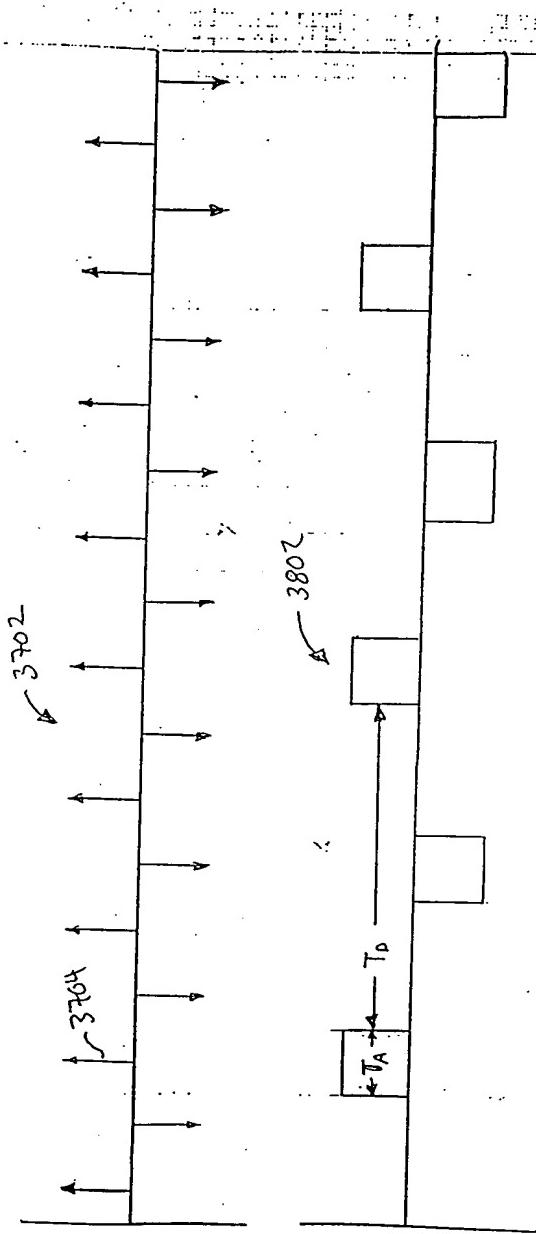


FIG. 38

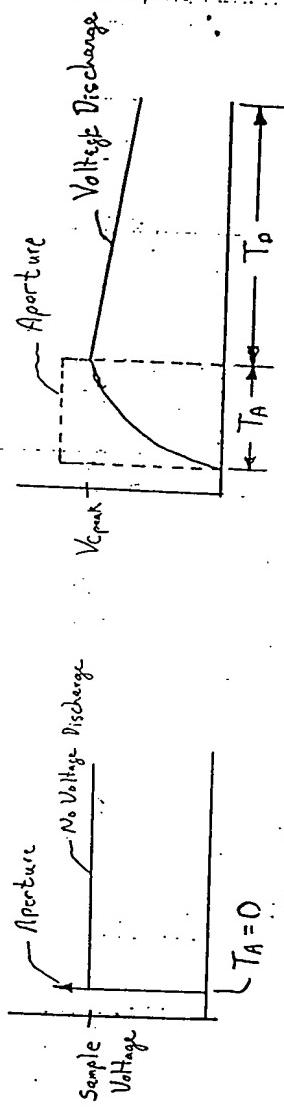


FIG. 39

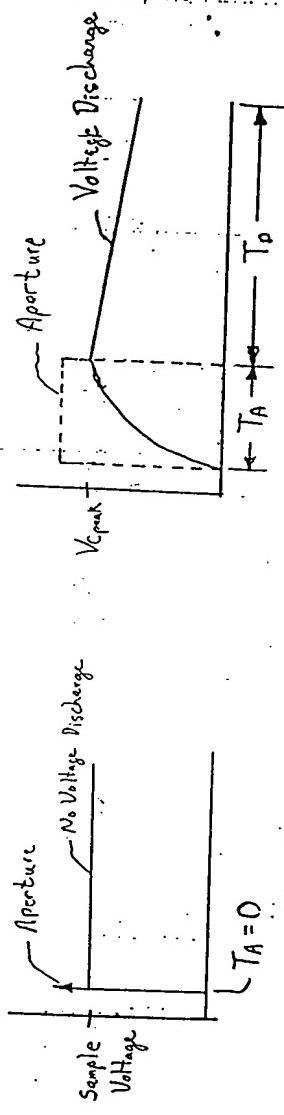


FIG. 40

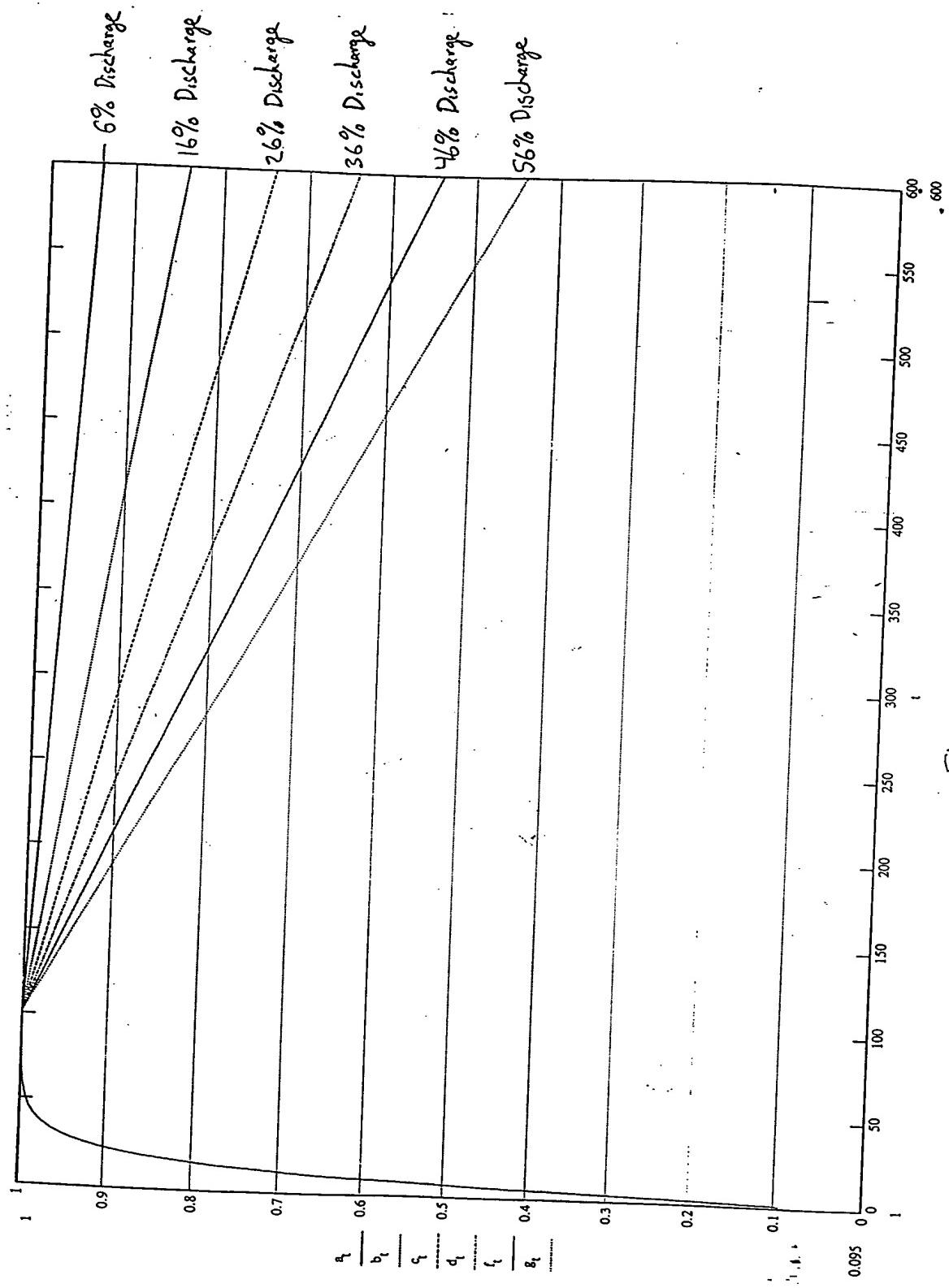
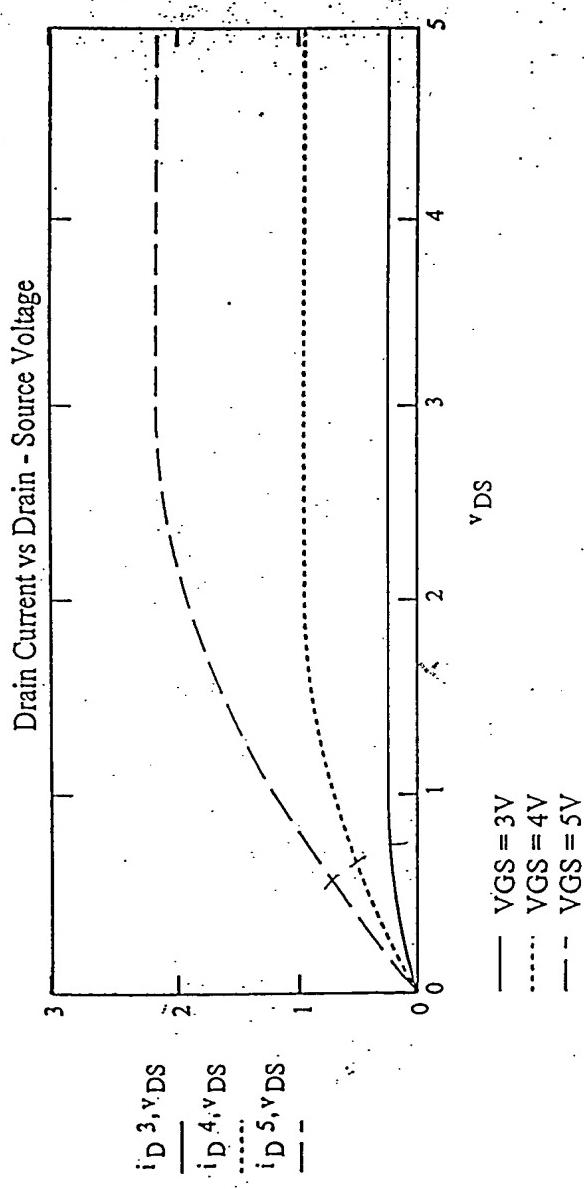


FIG. 41

1000 900 800 700 600 500



F16.42

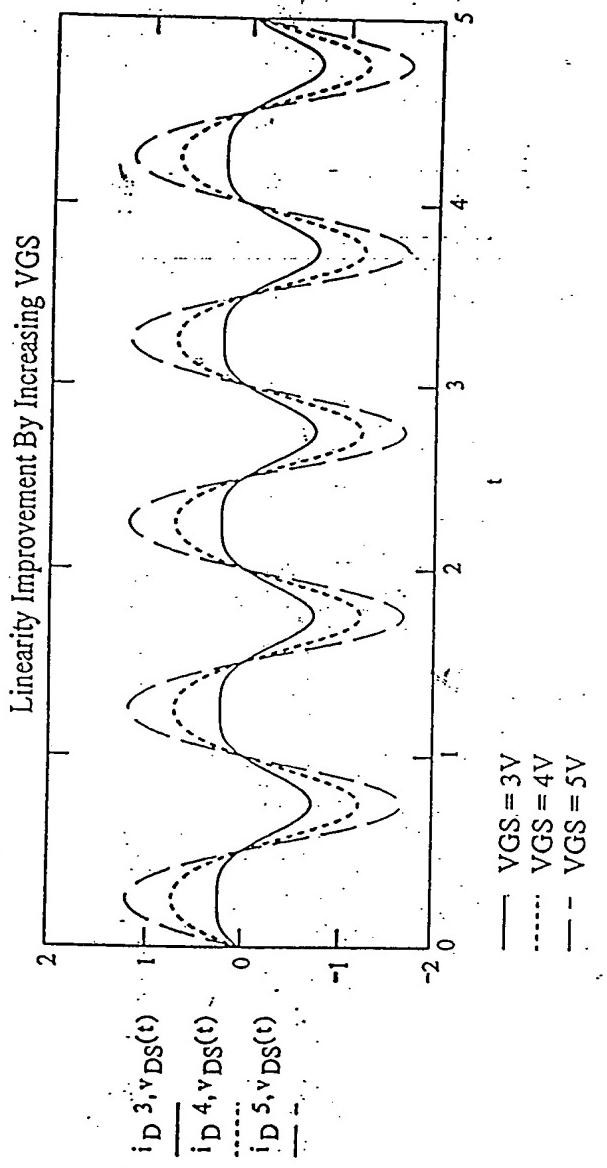
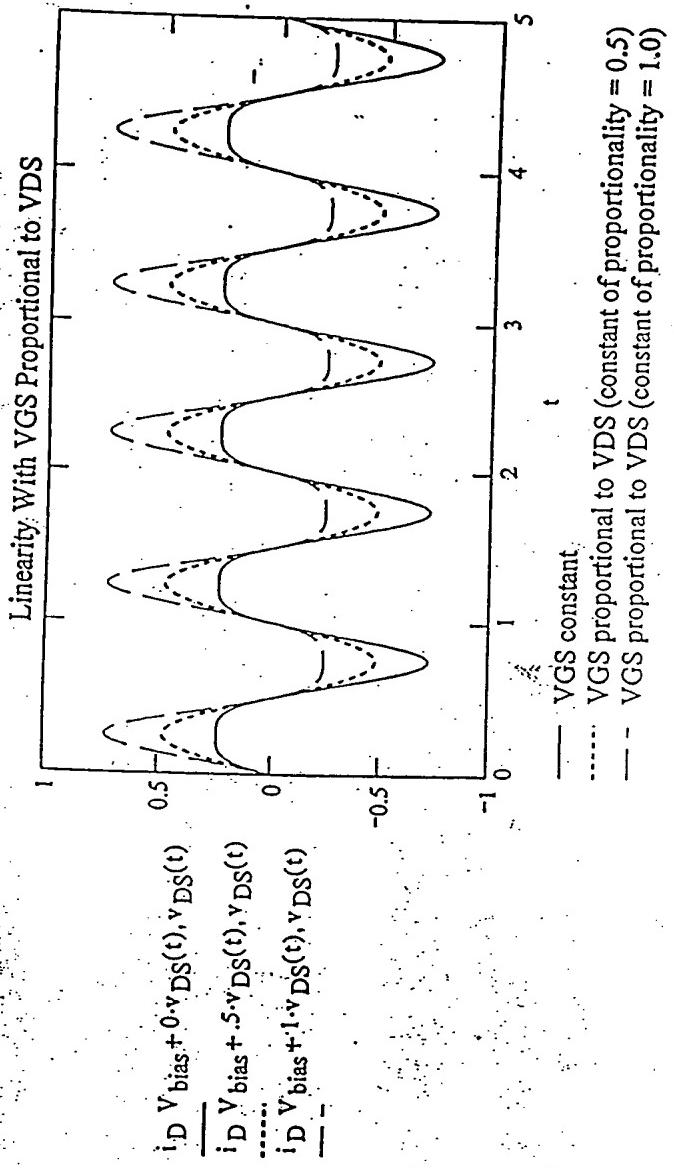


FIG. 43

F16.44 F16.45 F16.46



F16.44

0 5 0 5 0 5 0 5 0 5 0

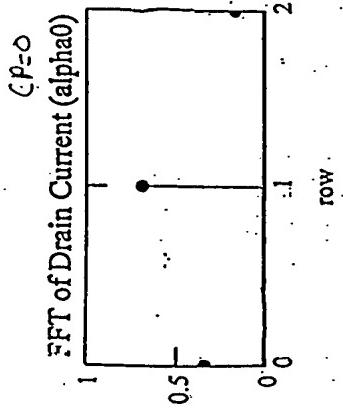


FIG. 45A

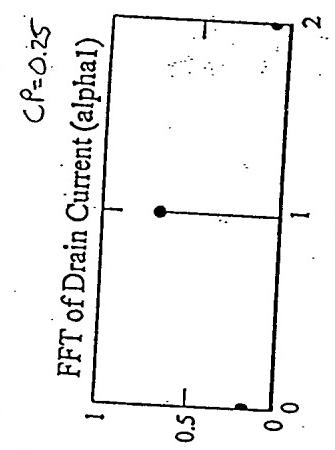


FIG. 45B

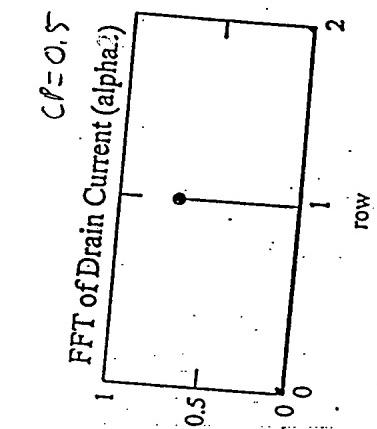


FIG. 45C

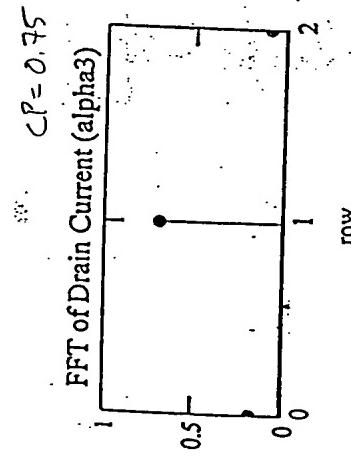


FIG. 45D

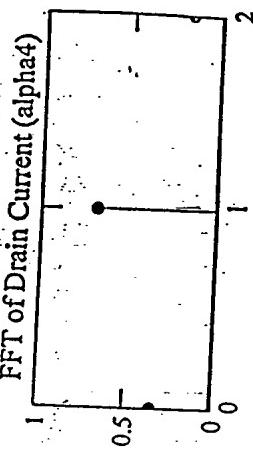
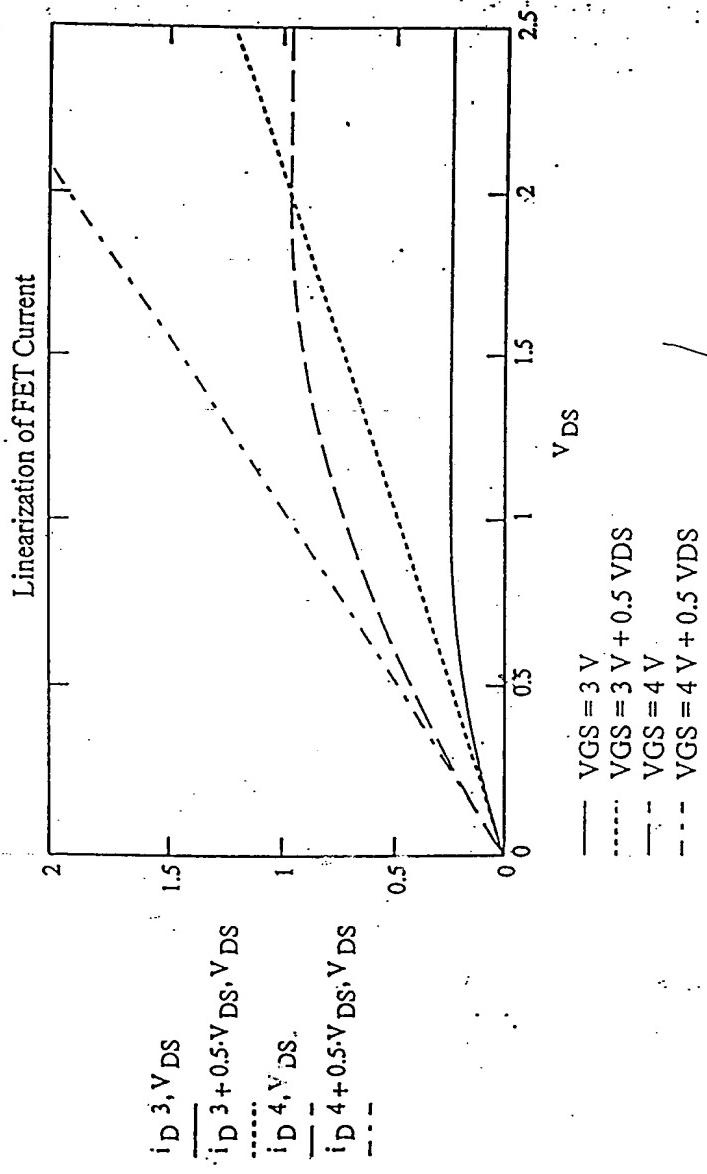


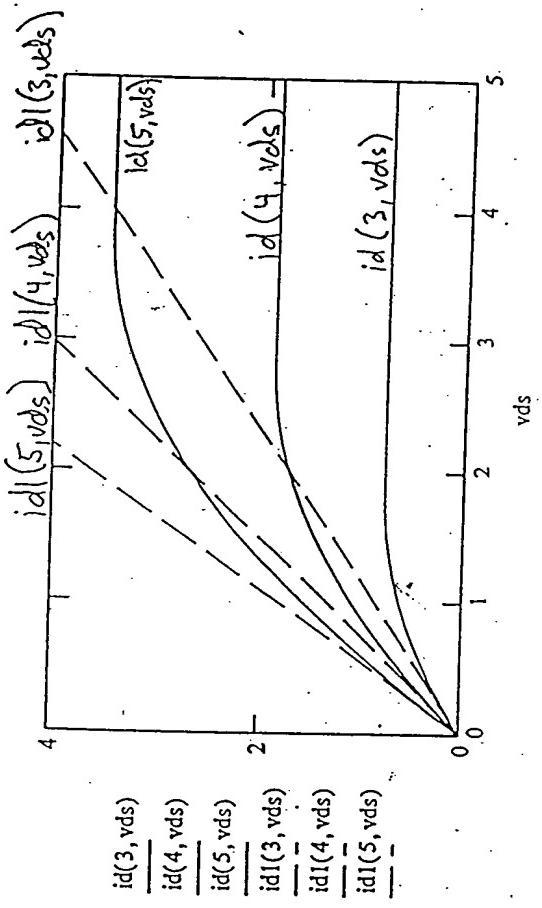
FIG. 45E

F16 F46



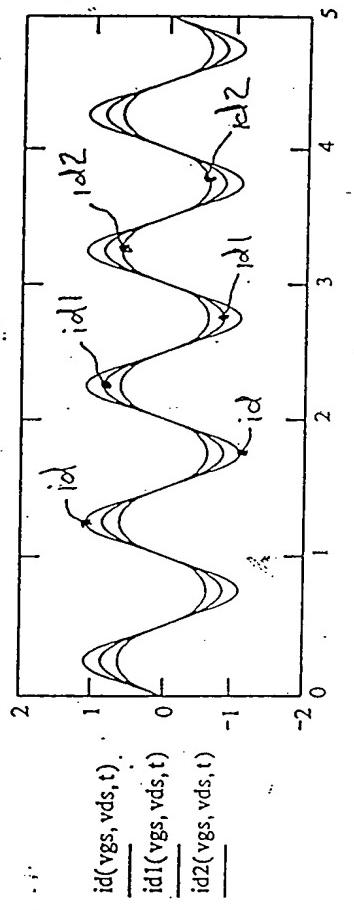
f16. 46

F16 46

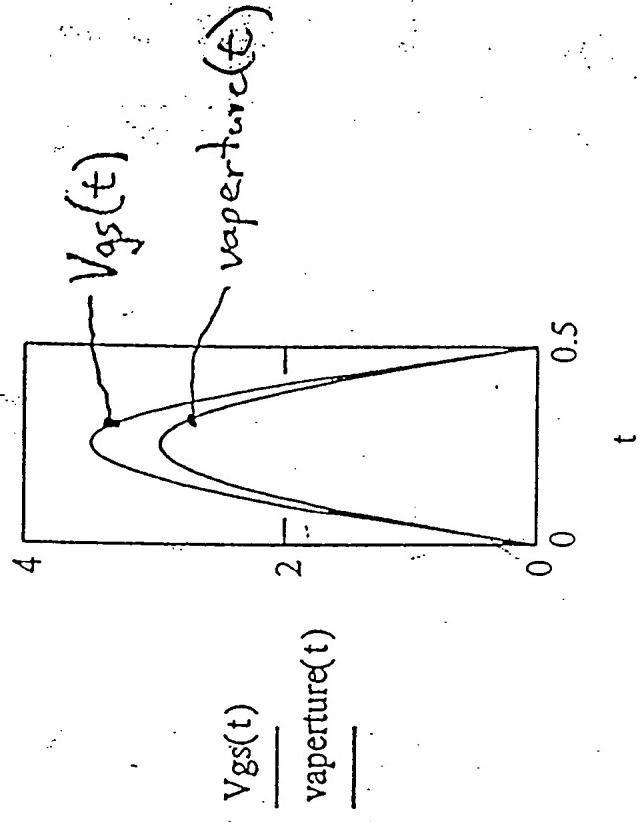


F16 47

0935535 0935535 0935535



F16, 48



F16. 49

0 50 100 150 200 250 300

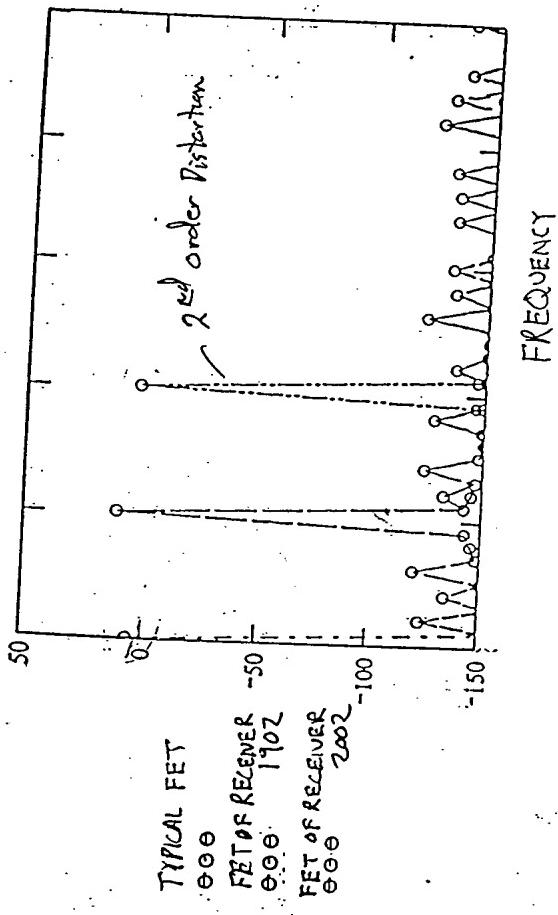


FIG. 50

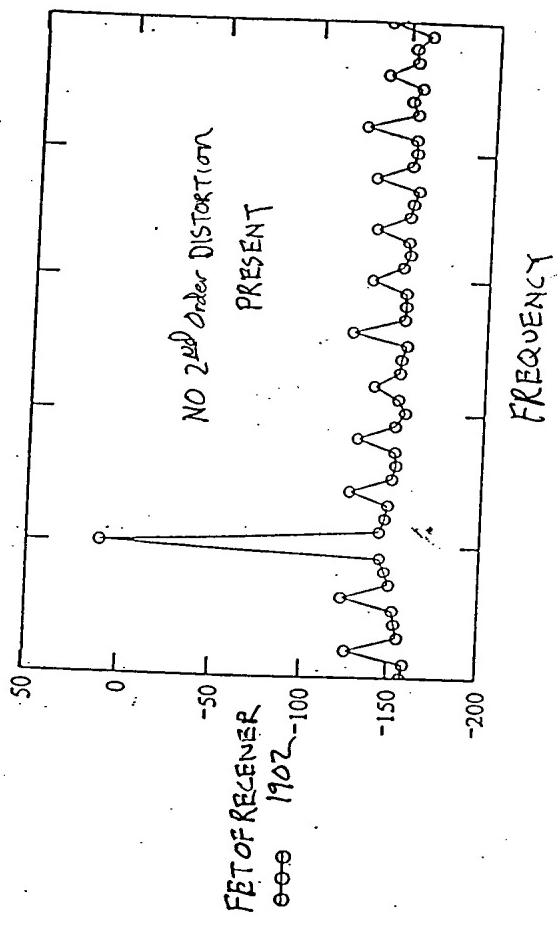


FIG. 51

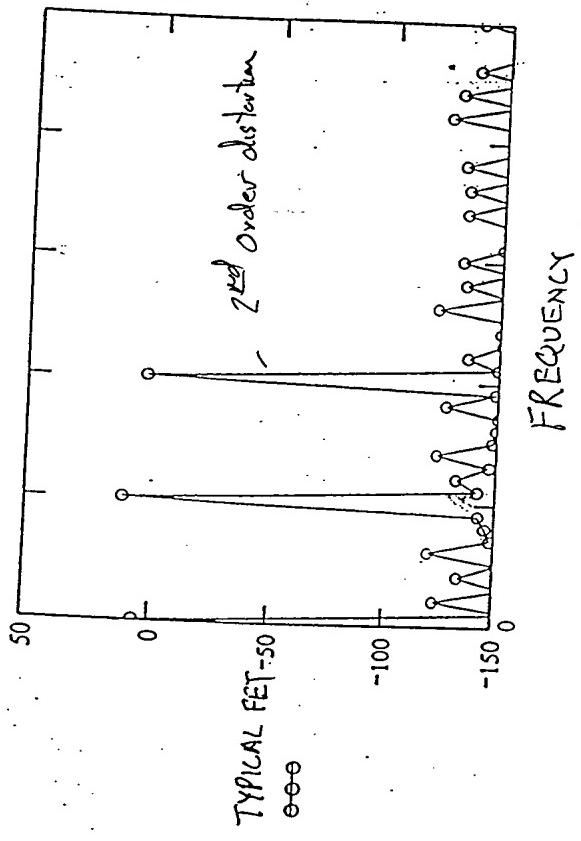
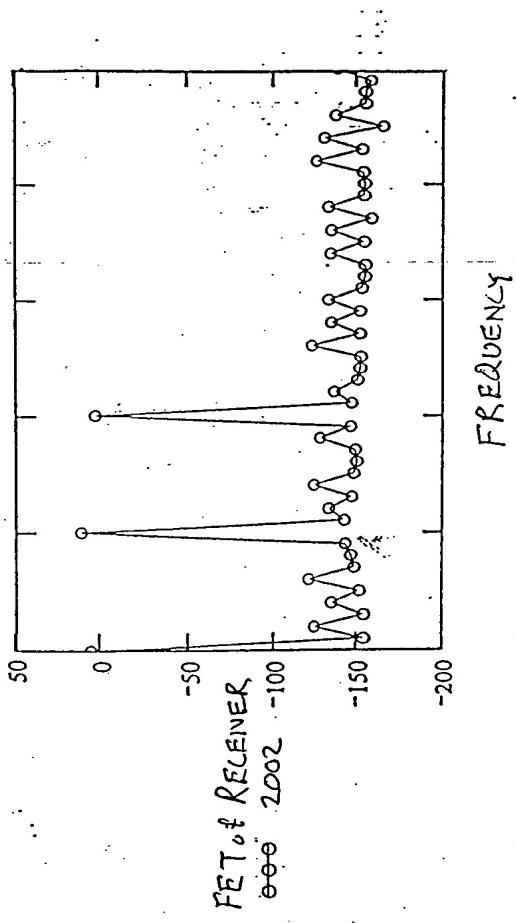


FIG. 52

0925585 T 05460



F16 53

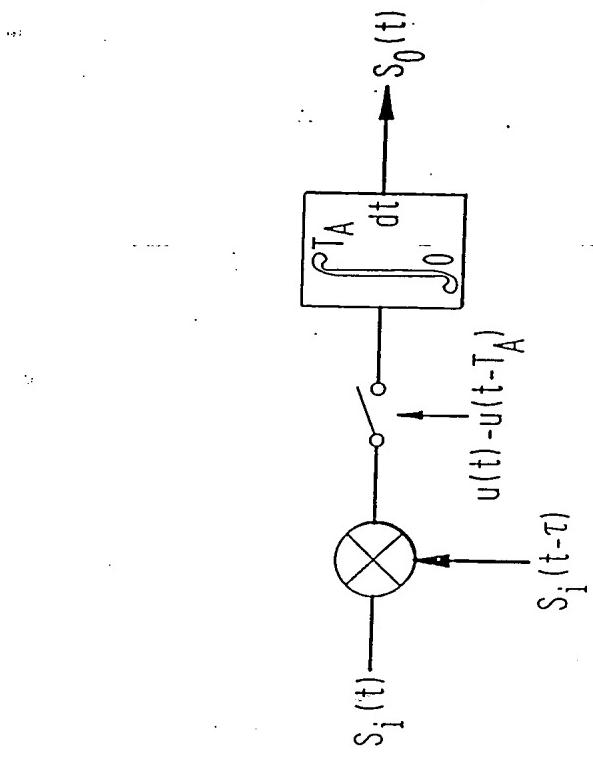


FIG. 54

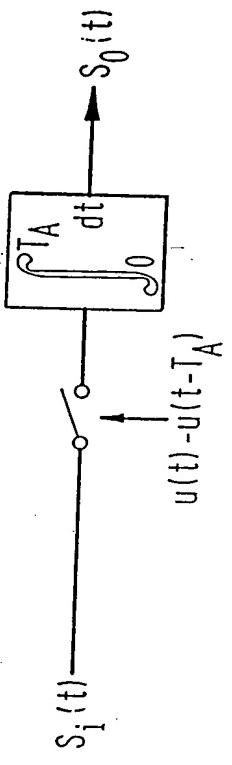
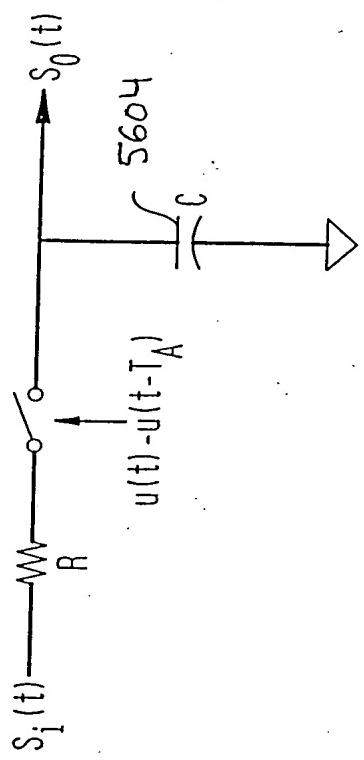


FIG. 55

FIG. 56



PROBLEMS

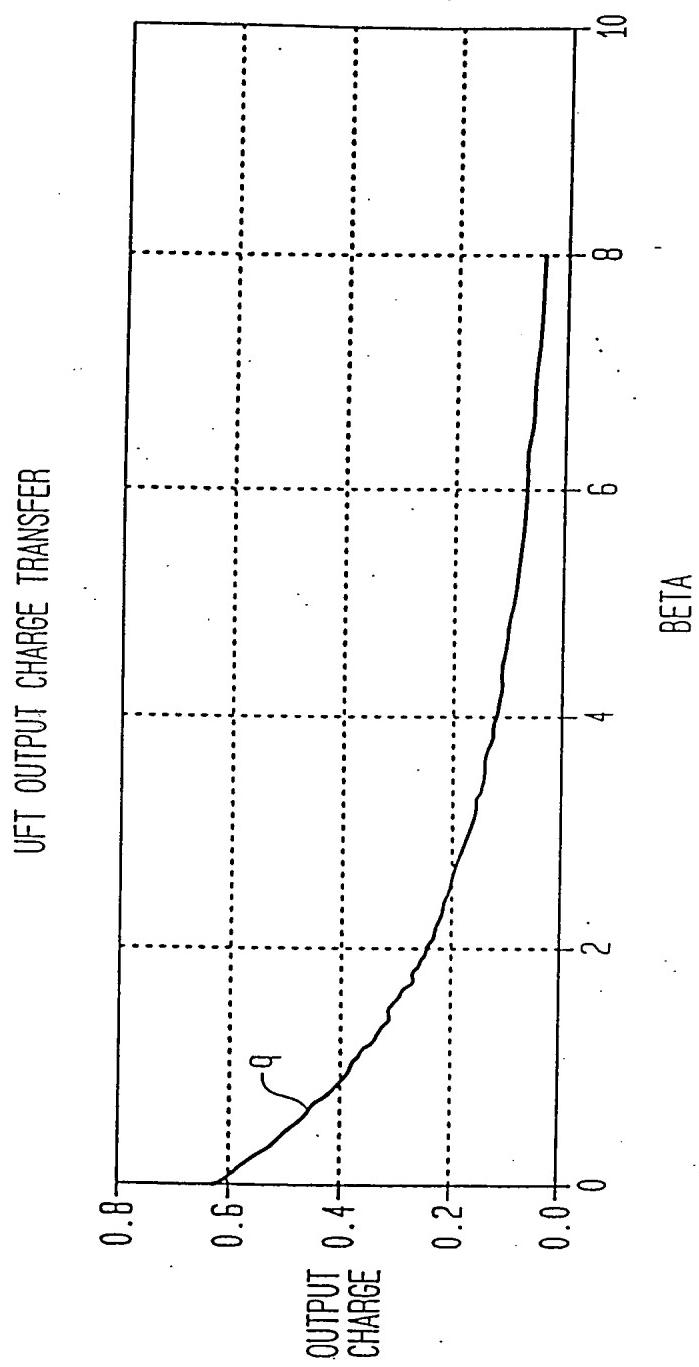


FIG. 57

09353500 051600

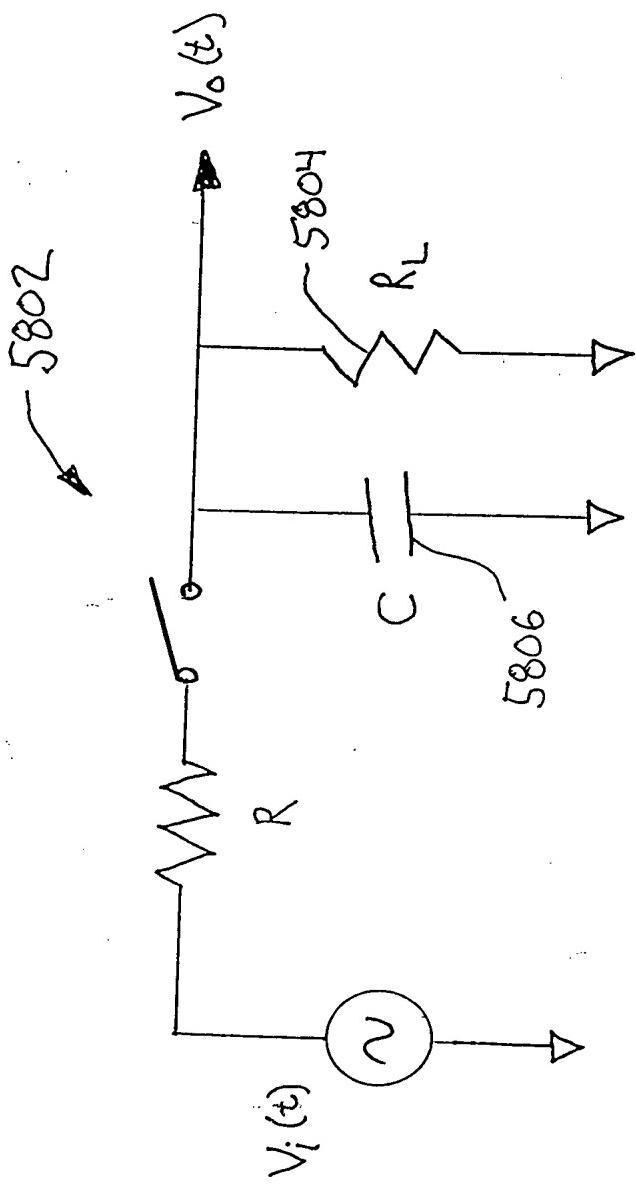
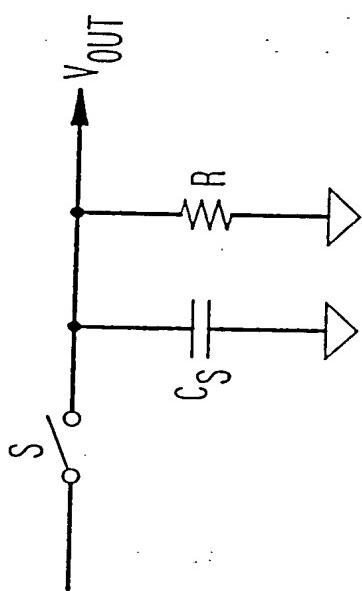


FIG. 58

Fig. 59



100 99 98 97 96 95 94

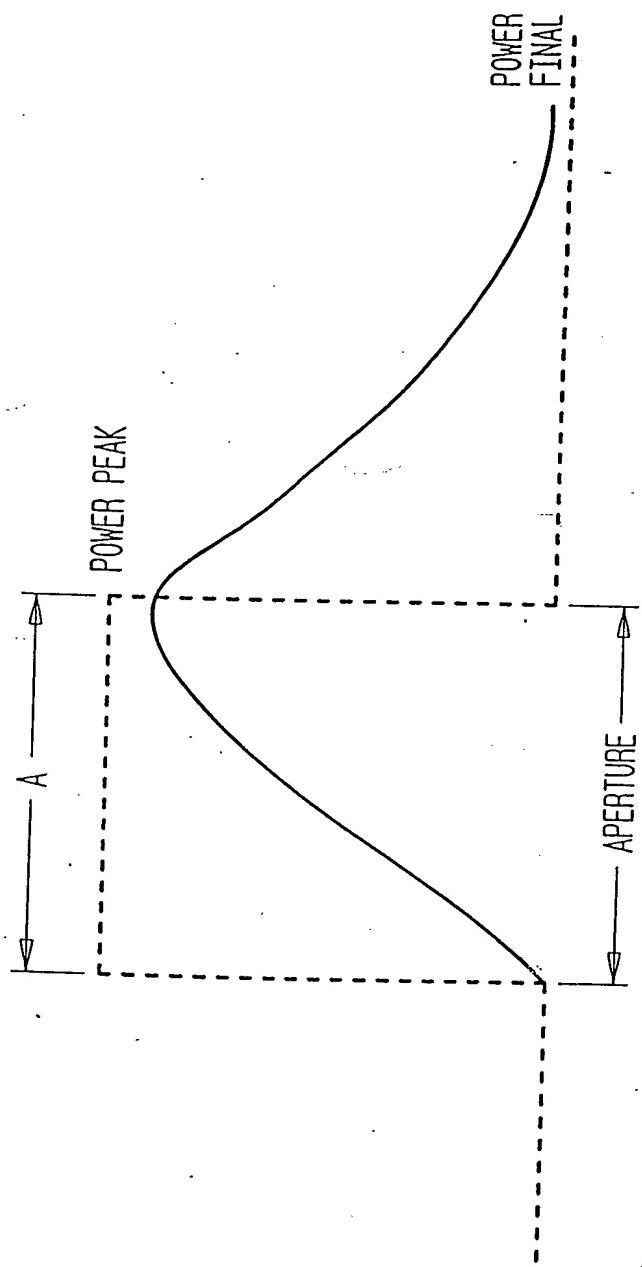
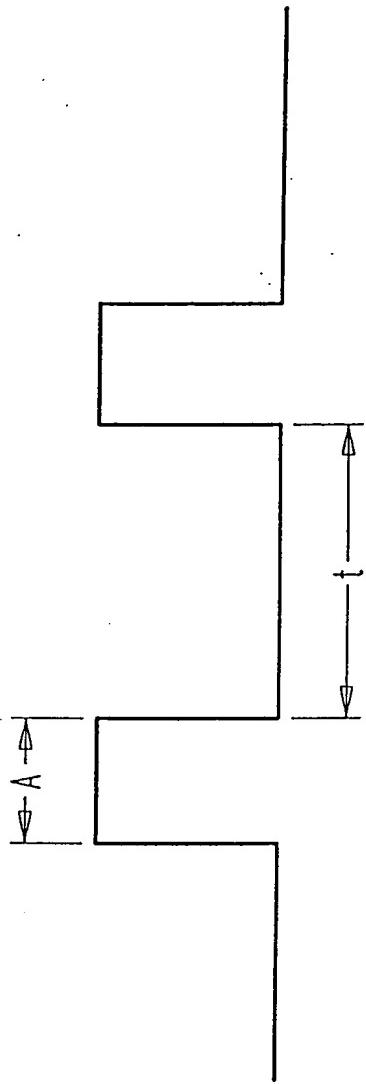


FIG. 60

FIG. 61



METHOD FOR DOWN-CONVERTING AN ELECTROMAGNETIC SIGNAL

6200

RECEIVE A RF INFORMATION SIGNAL

~6202

ELECTRICALLY COUPLE THE RF INFORMATION SIGNAL TO A CAPACITOR

~6204

CONTROL A CHARGING AND DISCHARGING CYCLE OF THE CAPACITOR WITH A SWITCHING DEVICE ELECTRICALLY COUPLED TO THE CAPACITOR

~6206

PERFORM A PLURALITY OF CHARGING AND DISCHARGING CYCLES OF THE CAPACITOR, THEREBY FORMING A DOWN-CONVERTED INFORMATION SIGNAL

~6208

END

~6210

FIG. 62

00000001 - 00000004